

# THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

Published monthly by The Dentists' Supply Company, Candler Bldg., Times Square, 220 West 42d Street, New York, U. S. A., to whom all communications relative to subscriptions, advertising, etc., should be addressed.

Subscription price, including postage, \$1.00 per year to all parts of the United States, Philippines, Guam, Cuba, Porto Rico, Mexico and Hawaiian Islands. To Canada, \$1.40. To all other countries, \$1.75.

Articles intended for publication and correspondence regarding the same should be addressed EDITOR DENTAL DIGEST, Candler Bldg., Times Square, 220 West 42d Street, New York, N. Y.

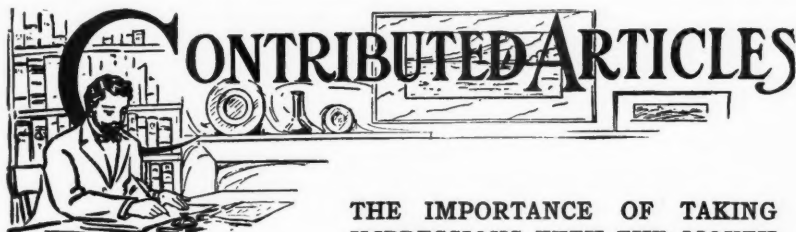
The editor and publishers are not responsible for the views of authors expressed in these pages.

Entered as Second Class Matter, at the Post-Office at Garden City, N. Y., Under the Act of Congress, March 3, 1879.

Vol. XX

OCTOBER, 1914

No. 10



## THE IMPORTANCE OF TAKING IMPRESSIONS WITH THE MOUTH CLOSED AND UNDER NORMAL BITING PRESSURE

BY SAMUEL G. SUPPLEE, NEW YORK

For years past many practitioners have sought to avoid plate work, particularly the making of full upper and lower dentures.

This has been due to the fact that the work has been surrounded by many mysteries and has often resulted in disappointment. The impressions seemed to be good, but the plates made from them did not fit. Many plates seemed to fit very well, yet patients complained that they could not use them even to talk with. And last but not least came the continuous trim, trim, trim to plates that did fit so that they could be worn comfortably.

Nausea has always been treated as a natural result of a plate being too long or as a condition of the patient rather than of the plate. Many well fitting plates have been cut short to avoid causing nausea, only to spoil the fit.

Looking at the past in the light of my present knowledge, dentists have been greatly blessed in the fact that only a small percentage of cases

is made difficult by long, free muscles, and a superfluous amount of soft tissue.

It is with this class of cases that I intend to deal in this article. I intend to reverse the usual technic of taking impressions. If this reversal of technic will solve the difficult cases, it stands to reason that it will make ordinary cases so easy that plate work will become a pleasure rather than a thing to be shunned.

Up to the present time the average dentist has been led to believe that plaster is the only proper material to use; and when an apparently good-looking impression has been taken, and a plate made that does not fit, the blame is generally laid to the fault of the vulcanizer or some procedure following the impression.

A few moments of careful thought in the proper direction will convince you that both the plaster impression and the present method of taking it are decidedly wrong when dealing with soft or movable tissue, as well as the idea that an air chamber in the centre of a plate is essential to secure a plate that will hold against the strain of mastication.

Many years of experience in making successful plates for patients who have had from one to twenty-five and more failures, have taught me that I have no use for plaster in any case where I expect a plate to be retained by so-called suction, or where I have loose and bell-shaped teeth to contend with.

I use modeling compound as an impression material and employ a special heating apparatus to control the temperature, so that if it is properly used it makes many things possible with this material which have been considered impossible heretofore.

#### EQUALIZATION OF PRESSURE ESSENTIAL

The greatest comfort in a plate can only be obtained when you have equalized bearing on the soft and hard tissue when they are in their working position. Hence this equalization must be done in the impression *with the mouth closed and under normal biting stress*, and in order that there may be no doubt about the finished product, the so-called impression must be the exact model of the proposed plate, as far as height of rim, thickness of edges and length of plate in the rear are concerned.

These features cannot be secured by the use of plaster in the ordinary way, owing to the fact that when the mouth is opened the muscles of the cheek and soft palate are all out of their normal position, and scraping the model is pure guesswork and will not give with accuracy the position they will take when relaxed. Practically all plates made from plaster impressions have spaces all around the rim which were made by the muscles and soft tissues out of their correct position. The plate being

smaller and thinner does not rest on the muscles or tissues in their relaxed positions. Hence, when the plate is in use it really only fits on the hard tissue of the vault and ridge that has not been changed by the movement of the cheeks and soft palate, and as a result the plate is easily tipped or thrown out of position during mastication.

For this reason you test plates to see if they fit with the mouth open and they seem to stick like grim death, yet the patient will tell you that he cannot use them to eat or even talk with, and it is then you generally blame the patient. The difference is due to the fact that when the mouth is open, the muscles are drawn tight over the edge of the plate and the soft tissues in the region of the vaults are distended, thus sealing the edges when the mouth is open.

When the mouth is closed, these muscular attachments outside of the ridge naturally move forward, and in doing so they either cut and chafe or dislodge the plate. The illustrations on page 365 of the different position of the attachment will give you some idea of their range of movement.

#### REFITTING AN OLD PLATE

This can be easily understood by taking an ill-fitting plate made from a plaster impression that reaches back over the tuberosity, and after drying it thoroughly, trace a small amount of very soft compound just inside the edge of the rim and across the rear of the plate, and while it is uniformly soft, place the plate in the mouth and have the patient close and swallow while you massage the cheek tissue and lips to force the material back under the rim of the plate, then cool in this position. If you have used enough material to compress all the soft tissues equally, you will be surprised to find what a perfect fitting plate you will have.

In doing this you have simply adjusted the most important part of the plate, in which the plaster was deficient, and have done so with the mouth closed and all the muscles in their normal position.

By duplicating this compound in rubber you have quickly transformed a useless, ill-fitting plate into the equivalent of a new and useful denture.

#### NAUSEA ELIMINATED

The fact that a patient gags when a plate is in the mouth does not mean that you should shorten the plate as many think, but that it should be lengthened until the edge of the plate can be imbedded at the edge of the soft palate, or into the movable soft tissue, so that the tissue will be drawn taut over the end of the plate.

The tickling sensation caused by the soft tissues vibrating over the edge of the plate is the cause of most all the troubles of nausea or so-called

gagging. If you will trace some compound across the back of any plate and force it up into the soft tissues, you will rid the patient of this tickling sensation.

This lack of fit across the vault in the rear is due to the fact that when the mouth is open, the soft palate is dilated or drawn down, and naturally pulls or changes the position of all the soft tissues anterior to the soft palate. Hence when an impression is taken with the mouth open, you secure a false impression which will fit the mouth only when it is open. As soon as the mouth is closed, these tissues are relaxed and your plate does not fit to the tissues when in actual use either talking or masticating.

#### THE ORIGIN OF THE IDEA

By observing the preceding principles, I have been able for years to take plaster impressions in cups made practically the same size as the finished plate, and secured the necessary compression of the soft tissue by scraping the model. By this method I was able to do very successful work, but with no degree of certainty that when the plate was finished I would not have to trim and relieve it at many points before it could be worn comfortably.

After seeing Dr. Greene's method of taking modeling compound impressions, in which he demonstrated the principle of relief without leak, secured by taking the impression with the mouth open, I have found it possible to reverse the principle and get far better results, by applying the principle of compression of muscles and soft tissues at their base when the mouth is closed under normal biting stress, thus automatically equalizing all pressure on hard and soft tissues.

When the plate is finished no trimming or relieving is necessary, for this has all been done by the patient and under the exact pressure that will be exerted when in use.

#### MUSCLES AN AID IN HOLDING PLATE

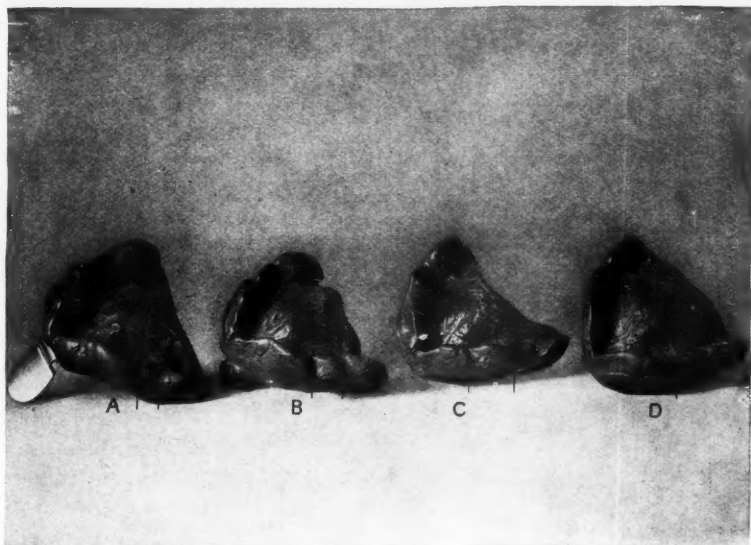
The fact that muscles have been the cause of throwing the average plate has been accepted by all as the "fly in the ointment" and the only remedy is to cut down the plate till they clear them, thus eliminating all bearing outside the ridge.

These so-called muscles can be of great value to you in holding a plate up rather than throwing it down if you will take an impression of them in the correct position.

To make this statement more clear, I will state that the muscles or attachments of the cheek and lips have three distinct positions:

When the mouth is open wide, they are in the rear position and take the form of little cords.





Four impressions of the same mouth. A and B. The direction of the pull of the buccal attachments is strongly backward, in these two impressions taken with the mouth open.

C. The anterior attachment has muscle-trimmed the impression nearer the median line and much less deeply.

D. The margin seems much less deeply trimmed, yet the impression is better adapted.



A

B

C

D

The same impressions as above with a plaster impression of the same mouth on the left.

When the lips are reached forward, as in whistling or taking food into the mouth, they are in their forward position and spread out like an opened fan.

When the mouth is closed to normal rest, they are in what can be termed the middle position, when they cease to appear as muscles in the real sense of the word, and are really only cheek attachments or soft tissue which can be changed by the movements of the cheek and lips.

Now the average impression being taken with the mouth open, and the plate made to conform to this position, it will fit when the mouth is open, but as soon as the patient closes these tissues move forward and have a tendency to carry the plate forward, which as you know is the easiest way to take a plate out of the mouth.

If you take an impression of the mouth closed, the plate will fit when in the position it is to be used; and when the mouth is open, the muscles will want to travel toward the rear, and in doing so they will attempt to carry the plate with them, but cannot carry it any further than the ridge in front will permit, and as a result will draw over the edge of the plate and automatically seal it so that the wider the mouth is opened, the tighter the plate will fit.

When these muscles are taken in their correct position, they can be compressed so as to equalize the pressure on the hard and soft tissue when under normal biting strain, and add another valuable asset to the comfort of a plate, viz: eliminate leverage or making it possible to set teeth outside of the ridge if desirable, and yet the patient cannot throw the plate by biting on the front or side.

#### PRINCIPLES REVERSED IN THE LOWER

In dealing with the Lower, we are obliged to reverse the principles applied to the Upper, and conform the edge of the plate to all muscles when in their distended position, which is their natural working position.

To thoroughly understand this, we must take into consideration that the tongue when in use during mastication, talking, and when swallowing, is continually being pressed against the roof of the mouth.

None of the above motions materially affect the muscles attached to the outside of the ridge, as these muscles are in action when the mouth is opened or in laughing, etc. Both lingual and buccal muscles are in motion when talking; hence you will readily appreciate that in order to get an impression that will relieve or rather conform to them when in normal working position, we are obliged to take the impression of the lingual muscles with the jaw closed, and with the tongue to the roof of the mouth; and to get the maximum distended positions of the buccal muscles the mouth must be open as wide as possible. The average impression

being taken with the mouth open, drives the tongue down into the floor of the mouth and spreads the cheek muscles out of their normal position, hence your finished denture will fit only on the top of the ridge.

#### MUSCLES OF LOWER JAW WILL STEADY PLATE

By making the edges of the plate conform accurately to the muscles when in their natural working position, you have secured one of the essentials necessary to comfort in a lower plate, viz: should the plate be dislodged from its correct position, the actions of the muscles of the tongue and cheek will automatically carry it back to place without any effort on the part of the wearer.

As many lower ridges are almost completely covered with loose tissue and free moving muscles, it is also very important to get an impression of these muscles under normal biting stress so that they will all be under equal tension when in use.

#### SIMPLE IMPROVEMENT WITH PLASTER

In dealing with an edentulous case for the ordinary mouth, you can get many of the essentials outlined above by using a very small cup and building up the rims with wax or modeling compound to the approximate height of the plate to be, and then take the impression in plaster with the mouth as nearly closed as possible, or if anything too far closed, and you will get better results than can be secured by the ordinary use of plaster; but if your impression is not the exact size of the proposed denture and you have not exerted the exact pressure characteristic of that particular mouth, you cannot be sure that your plate will be useful to the patient when finished.

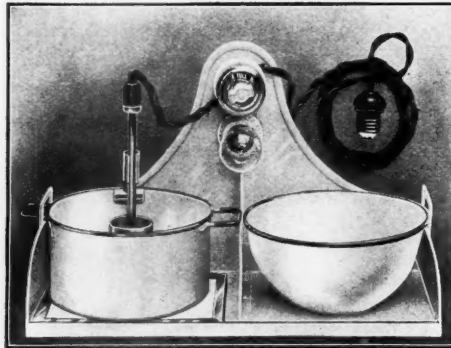
By using modeling compound properly, you are not only able to know positively how your finished denture will fit, but you secure a **correct bite at the same time.**

To use modeling compound successfully you must have its consistency exactly right. This can only be obtained by immersing same in water which is heated and temperature readily controlled at a given point. This must be accomplished conveniently near your chair.

I find the apparatus illustrated on page 568 most convenient in controlling the temperature of the water. It consists of an electric heater, a controller, hot and cold water pans, and an asbestos protecting block, used as follows:

Fill pan with water. Completely immerse the ring of the heater in water so that it is just underneath the surface. Turn on switch to full, and when the water is boiling turn it off to low. This will heat the water on the surface only, and the water at the bottom of the pan will be of a suf-

ficiently low temperature so that you can let modeling compound lie in it indefinitely without injury. The low switch will maintain the water at a proper temperature, that is near 160 degrees on surface, and 140 degrees at bottom. As the water evaporates, the heater can be slipped down in the little clip so as to keep it entirely immersed at all times. (Caution: If the heater should not be kept covered with water, it is liable to burn out.)



The advantage of this heater lies in the fact that it will keep the surface of the water very much hotter than the water at the bottom; and in this way it will be possible for one always to mould his material in the hot surface water, and leave the excess in the bottom, so that it is always in a condition for use, without danger of spoiling material from overheating. It also eliminates sticking to the bottom of the pan as is the case where the heat is applied in the usual way.

A pilot light which burns as long as the heater is on, is valuable in that it prevents one going home at night and leaving the heater to burn out.

#### EQUALIZATION UNDER BITING STRESS ESSENTIAL

The most successful denture is the one that fits best when in actual use, and as every mouth contains hard and soft parts, many of which are materially changed by the movements of the cheeks and muscles of the soft palate, it is therefore necessary to equalize the pressure on these tissues to conform to the natural stress applied by the patient.

The pressure applied by the human jaw varies from 15 to 250 pounds, and with this wide range, it is very important that an impression should be taken under the stress that is characteristic of the individual. This stress varies according to the relative position of the jaw, and to get the greatest use from a plate these conditions must be carefully considered.

## ABOUT MUSCLE STRAIN

It is here that a few words with reference to muscle strain in bite taking is essential; and until you thoroughly appreciate the existence of it and the necessity of overcoming it before setting up teeth on an articulator, you will continue to blame your laboratory man or your flasking, packing, and vulcanizing with many things not due them, such as teeth striking only on one side when finished or where they strike on the molars only and not on the eight fronts.

The mandible is at rest when all the muscles attached to it are relaxed.

Every movement of the mandible is accomplished by the pull of one or more sets of muscles attached to it. These movements differ greatly in character and in importance to the dentist who is to make dentures. The movements connected with trituration of food are the most important, and the dentist must provide for the muscles' positions in the grinding movement.

It is not difficult to establish the proper pull of the muscles, when taking the bite. The ridge of the upper trial plate is made so that the lips lie in light contact when the mouth is closed. The occlusal surface of the ridge of the trial plate is warmed about  $\frac{1}{16}$  of an inch deep in front and  $\frac{1}{8}$  of an inch in the rear, and the trial plate put into the mouth. The patient is instructed to touch the lips together, and when this position is attained, the patient is asked to bring the jaws firmly together. This brings the muscles attached to the condyles into their masticating positions and equalizes the muscle strain.

By doing this and embedding the margins of the plate in the soft tissues, as I have described elsewhere, the plate can move sideways or even rotate slightly without breaking suction.

Embedding the margins of a plate in the soft tissue is a valuable asset in mastication, for the possibility of the plate moving sideways or rotating slightly without breaking suction makes it possible for the cusps of the teeth to slip over opposing cusps which would otherwise displace the plate. By using this system of impressions and the free play it permits, I am able to use the Gysi Simplex Articulator and still give the patient perfect contact throughout the entire masticatory movement.

The writer has seen a great many plates where the plaster impressions, the Gysi Adaptable and other articulators have been used and an apparently perfect movement established; yet patients could not masticate with them, yet by taking the impression with the mouth closed and equalizing muscle strain under normal biting stress and using the Gysi Simplex Articulator, perfect satisfaction has been attained even though from the idealist's standpoint they could stand considerable criticism.

This is due entirely to the fact that the impressions, etc., were taken with the mouth closed in a position that cannot be seen and hence the plates will have more freedom of movement with the lips dropped down, and they will fit best when in that position.

#### ROOFLESS PLATES POSSIBLE

When an impression is taken with the mouth closed and under normal biting stress and proper pressure brought to bear on the soft tissues, roofless plates can be made for the average case without a great deal of trouble regardless of conditions that have made them seem impossible in the past.

#### ELIMINATING UNDERCUT IN PARTIALS

The essential of a partial impression where you have undercuts and dovetail spaces to deal with, is to take an impression of just as much of the undercuts as you can use in the finished plate.

There is no use of taking an impression of the neck of a bell-shaped tooth if you only have to cut the rubber out when the plate is vulcanized and finished simply to get the plate in place.

When cutting and fitting a plate around the necks of teeth, the majority of it has to be done by guess, and in doing so you remove little points that would be very valuable in holding a plate firmly in place. In plaster impressions many of these little points are lost in the impression or have to be waxed back in place. This can only be approximately done, and the slightest deviation will throw out the fit of the whole plate. If cut out by guess, many times it does not retain the close adaptation necessary in steadying the plate.

By the proper use of modeling compound and special trays, it is possible to eliminate all the undercuts in the impression without dragging or using cores so that the finished denture can be inserted into the mouth without filing and fitting even for the most difficult bell-shaped cases.

In partial cases there is no place where this method of taking impressions shows up to better advantage than when supplying the lower bicuspids and molars with the type of denture generally known as the Lingual Bar.

While this type of denture has many advantages to commend it to use, it has been extremely difficult to get it to fit accurately. The reason for this is very evident when you study conditions and consider the present method of impression taking.

The soft tissue overlying the buccal side of the ridge is controlled almost entirely by the action of the masseter muscles, and the lingual side by the action of the tongue in swallowing. All of these have an



entirely different position during mastication than when the mouth is open.

The masseter changes position under normal grinding stress; and unless the plate conforms to the position of these muscles under grinding pressure, patients will not experience the comfort to which they are entitled while you are kept guessing trying to trim, trim, trim, and explain.

#### ONE UNION SQUARE

---

#### LET US REMEMBER

"In conclusion, let us remember too, that when it seems to us that Germany is indifferent to human life in waging this fierce war against all the world, a sobering and illuminating thought is this—that *even if the war is a long one and 630,000 per year of her sons are killed, she will still not have murdered as many of her people as we in the United States annually kill in our industries and otherwise.\** We have killed these human beings that capital might have larger profits, that our rich men might gamble at Monte Carlo and our women forget that life has duties.

Germany has kept her men alive by protecting them from diseases and from being run over by railroad trains or dismembered in mills and factories, so that she now has men to fight for her and willing to fight in this time of national peril. *So let us remember* that it is no worse a death to die in battle than it is from needless diseases and inexcusable accidents, and also no more cruel to ask men to die in fight for racial freedom than it is to die in producing large dividends for captains of industry."—*Selected.*

---

#### "LINCOLN DENTAL NEWS"

We are in receipt of the first number of the above little paper which is devoted to "dentistry in general and the Lincoln Dental College in particular." It is a very interesting publication and we wish it success and long life.

\*See report of Irving Fisher, member of the Conservation Committee formed by President Roosevelt.

## POWER OF LEGISLATURE TO REGULATE DENTAL PRACTICE

BY A. L. H. STREET, ST. PAUL, MINN.

## FOURTH PAPER

No matter how doubtful the question may have been a few years ago, the scope of the power of a state legislature to regulate the practice of dentistry has been well defined by repeated court decisions in probably every state in which such regulations have been enacted. The substance of these decisions is to the effect that any reasonable requirement may be imposed to prevent incompetent and unskillful practitioners from imposing upon the public.

"It may be said beyond doubt that the Legislature under the police power of the state has authority to control and regulate the practice of dentistry and to prescribe the qualifications of those who engage in that profession." (Kentucky Court of Appeals, 135 *Southwestern Reporter* 312.) The power even extends to the regulation of veterinary dentistry. (Texas Court of Criminal Appeals, 150 *Southwestern Reporter*, 618.) And in adopting such a regulation, the Legislature has broad power to define what it means by "practising dentistry," and thus to make clear what is intended to be made unlawful. (California Court of Appeal, 110 *Pacific Reporter*, 823.) But statutes of this kind, being of a penal nature, must be strictly construed in favor of persons who are charged with violating them. (Connecticut Supreme Court of Errors, 76 *Atlantic Reporter*, 295.) The reasoning upon which the Legislature's power of regulation is sustained by the courts is illustrated by this statement from an opinion of the Washington Supreme Court: "It is of the highest importance to the state that suffering and afflicted humanity shall not be subjected to the care and treatment of unlearned and unskilled persons. In its efforts to prevent such a misfortune to its people, the state may adopt a standard for the test of fitness to engage in the work of what should be a learned profession. When that standard is adopted, those who assume to do the work of such a profession must prove their fitness by the test of such standard. Otherwise they violate the law, and cannot be recognized by the state as practitioners of a lawful profession when they seek to follow it in an unlawful way." (72 *Pacific Reporter*, 110.) But a former requirement of the Washington law that a license be obtained before owning, running or managing a dental office, as distinguished from the actual practice of dentistry, was adjudged void. (79 *Pacific Reporter*, 635.) The Court said: "We are unable to say or perceive that the health, morals or physical welfare of the public, or any of

the personal or property rights of its individuals are endangered by the ownership and management of a dental office, so long as those employed therein to do the actual dentistry work are qualified as by law required."

In a Missouri case (103 *Southwestern Reporter*, 1078) the Supreme Court of that state decided that the law of Missouri which requires a diploma or a license from another state as a prerequisite to examination for a license before the state dental board is valid. Mr. Justice Lamm, noted among judges and lawyers for his sense of humor, summed up the objection made to the law and the court's decision overruling the objection as follows: "That to say a dentist shall not be examined or licensed who holds no college diploma or no certificate from another dental board is as unreasonable as to put up the bars to one who had gray eyes, or who had red hair, or who stood, say, 5 feet 8 inches in his socks — all restrictions of that like, it is argued, are whimsical, unreasonable, and arbitrary, and hence plainly outside the legitimate province of legislative control, and void. But is a statute calling for a certificate from a reputable dental college (or other like voucher or safeguard) attesting the bearer to be proficient in the learning and technique of his profession obnoxious to the criticism that such requirement is not germane? We think not. If per adventure, the law had actually put a ban on gray eyes or fiery locks, if it had required successful applicants to array themselves in Highland costume and perform in a pleasing way on a bagpipe, or believe (without mental reservation) in each of the five points of Calvinism and a protective tariff, or chisel an Aphrodite as cunningly as Praxiteles, or submit a thesis on springing use or the rule in Shelley's case — we say if the statute had prescribed such malapropos qualifications in dentistry as that, then a question would be presented not here now."

The New Jersey Supreme Court has held that, although the right to practise the dental profession is property which cannot be destroyed without adequate compensation, the law of that state, which requires a license to be procured as a prerequisite to the right to practise is valid, it being held to be within the power of the legislature to impose reasonable restrictions on the right. (55 *Allantic Reporter*, 94.)

The power of regulation here discussed was upheld by the Washington Supreme Court in the case of *In re Thompson* (78 *Pacific Reporter*, 899). In this case the provisions of the Washington law requiring examination by the State Board of Dental Examiners, and providing that only those persons possessing good moral character and presenting diplomas from dental colleges in good standing, shall be admitted to examination, and providing that certificates shall be issued by the board, were held not invalid as being unreasonable, nor as conferring legislative power on the Board, nor as being otherwise unconstitutional.

It was just a few months ago that the Oregon Supreme Court had occasion to sustain the validity of the dental registration law of that state, which requires practitioners to file their certificates in the counties where they engage in practice (130 *Pacific Reporter*, 985.) The court held that the law applies to non-residents, as well as residents, and, hence, is not invalid as discriminating against the latter class.

The South Dakota law, which makes it unlawful to practise dentistry without a license, has been held not to be unconstitutional as against dentists who were engaged in practice before the law took effect in 1909, as destroying vested rights. (132 *Northwestern Reporter*, 686.) The South Dakota Supreme Court said: "The conclusive weight of authority seems to hold that statutes prescribing the qualifications of dentists and physicians and surgeons, requiring them to take out a license, in no manner impair any vested right as respects those who were practising in the state prior to the passage and going into effect of the statute." The court cites decisions of this point by the highest courts of Missouri, Louisiana, Michigan, New Jersey, New York, Iowa, and Tennessee.

A Kentucky dental law was upheld by the Court of Appeals of that state in 1911. (135 *Southwestern Reporter*, 311.) The law makes it unlawful for any person to practise dentistry under the name of any company, association or corporation, excepting those who have been in actual business for fifteen years or more. The court said: "It also seems clear that in dealing with this subject the Legislature might with much propriety in the legitimate exercise of its authority and without any exception have prohibited persons from practising dentistry at all under the name of a company, association, or corporation. But in saying this we do not, of course, mean to hold that dentists may not freely practise under a partnership, company, or association name, if it furnishes to the public correct information as to the persons actually engaged in the practice, and the company, association, or partnership is composed of the persons who are actually practising under its name. But we think that it would be harmful to the public good to permit dentists to practise under the name of a company, partnership, or association that was not composed of the persons who were actually engaged under its name in the practice of dentistry as dental surgeons, and a corporation should not be allowed to engaged in the practice of the profession. But the act under consideration apparently recognizes the right of dentists under certain conditions to practise under the name of a company, association or corporation, and so, however much we might be inclined to question the wisdom of the legislation, we do not feel authorized to declare that the Legislature did not have authority to confer the limited privilege granted by the act."

The Minnesota law which requires that any person shall be deemed to be "practising dentistry," so as to be subject to the requirement for license, who shall use the word "Dentist," of the letters "D.D.S.," or any other title representing him to be engaged in practice has been sustained by the Minnesota Supreme Court as being a valid exercise of the Legislature's power, and not to constitute a deprivation of liberty or property without due process of law.

The Illinois Supreme Court has upheld the requirement of the law of that state that all applicants must produce a dental diploma, or be a graduate from a reputable medical college, excepting applicants who have practised in some other state for at least five years prior to the application. Nor is the law invalid because it provides that it shall not be construed to prevent licensed physicians and surgeons from extracting teeth, and dental students from working under competent instructors in a reputable dental college recognized by the board of dental examiners. (77 *Northeastern Reporter*, 472.)

The Missouri law has been held not to be unconstitutional as amounting to a deprivation of property rights without due process of law nor as vesting judicial power in the state dental board.

The Colorado law has been also, sustained, though it restricts practice to persons holding diplomas. (74 *Pacific Reporter*, 890.)

The Supreme Court of California upheld a provision exempting persons engaged in practice at the time the dental law of that state was adopted from the necessity of taking an examination, and a further provision restricting eligibility to examination to graduates of dental colleges, graduates from high schools who have served as apprentices for four years, and dentists from other states with at least five years' practice. (77 *Pacific Reporter*, 879.)

---

## TWO PRACTICAL HINTS

For a sand paper carrier on your lathe take the wooden spool that comes around your "last" Duplex spring and put a ferule of tin or brass, on one end. Cut it down with a file; this is cheaper.

When you are out of dental lac for your Coates' Swager, try modelling compound, it is better and cheaper.

— H. A. MAGRUDER, D. D. S., El Paso, Texas.

## THE "DENTAL NURSE BILL" A FRAUD

BY HOWARD P. BARBER, D. D. S., SPRINGFIELD, MASS.

An editorial in the Springfield (Mass.) *Republican* some time ago, anent the "dental nurse bill" as proposed in the Mass. Legislature seems to demand an answer. The editorial was a short one as follows: "Opposition has been made to the proposed change in the state dental law which would provide for dental assistants licensed to clean teeth, the objection urged being that it would be difficult to prevent abuses of the privilege. Would it be more difficult, it may be wondered, than to prevent nurses from acting as physicians? That point remains to be demonstrated, and unless serious difficulties in the practical working of the plan are shown, the better of the argument seems to lie with the civic service league, which is interested in the measure for the sake of the school-children.

"It is found that 95 per cent. have dental defects, and that of these 75 might be avoided by proper care. The most efficacious remedy found is a thorough periodical cleansing by an expert, but the cost is at present prohibitive, and it is said that there are not enough dentists to do the work. To meet this need it is proposed to have assistants, who would do the cleansing under the supervision of dentists.

"From the side of the schools it is a reasonable solution, and some dentists approve; the opposing majority will have full opportunity to state their objections." So runs the editorial and while it does not come out openly for the bill it seems to lean toward its support.

This bill has come up several times in the past few years and has been invariably opposed by both the board of registration and by the majority of the profession. Its supporters who are mainly Boston men are stickers though, and lately have been working to replace members of the board of registration whose terms have expired with men favorable to the bill. At this time they are working against the Worcester member who has been opposed to the bill, and a deputation of representative dentists called upon the governor to speak in his behalf.

As to the bill itself, I say that any change in the state dental law such as is proposed by the so-called dental nurse bill is a step backward and would be the means of permitting flagrant abuse of the public confidence. It is very difficult even now to prevent unlicensed men from practising dentistry—it is common knowledge that there are many practising in this Commonwealth and others, who are unlicensed. Only a short time ago the Rhode Island Dental Society had several men arrested for so doing in Providence and vicinity, one of the men arrested being in the employ of one of the members of the board of registration. What then may I ask



would be the result if every dentist had an assistant *licensed* to work in the mouth? From cleansing the teeth to extracting temporary teeth and placing plastic fillings is only a step and I warrant that 90 per cent. of the dental nurses would be performing these latter operations within a short time after the passage of the bill.

The proponents of this bill are men whose sole aim is—as it has always been—to promote their own selfish interests. They do not wish to pay a graduate dentist a fair salary, so they say "We'll get this bill thus and the nurse can take care of the overflow." The nurse cannot leave in a few years and go into business, taking with him a share of his employer's business, as is the case with the graduate. What is to prevent a man's having two or more nurses in the event of his having a large practice? He can get them for about half the amount he would be obliged to pay the graduate operator.

There are plenty of dentists in practice who can take care of the children and who are willing to do so at a cost not at all prohibitive. The men who will employ nurses do not propose to *give* the services of the nurses to the children. They are going to *charge* for them.

As for any benefit the public will derive from this bill—it is all bunk. A few dentists with large practices will be the ones to benefit.

What the public needs is education along the line of oral hygiene—not by so-called dental nurses at \$12 per week, but by sincere professional men who know their business.

Let the dental societies plan a campaign of education by means of lectures before clubs and societies, talks in the public schools, motion pictures, mouth hygiene exhibits, and advertising in the public prints. Not very long since the Commercial Travellers of Springfield held an exposition in the new municipal auditorium, attended by thousands of people, at which many interesting exhibits were shown of various products. It was a splendid opportunity for the dentists of Springfield and vicinity to give an exhibit which could have been very instructive. I made the suggestion, but was given the laugh.

In these ways the 95 per cent. of children with dental defects would be reduced to much more satisfactory percentage. It is not lack of facilities to take care of the children that we face—but the indifference and ignorance of the public toward the great truths of oral hygiene, and this public ignorance is due to the fact that dentists are not good business men. They do not create the market for their goods. To create this market we must educate our public and the greatest modern educational force is advertising.

Massasoit Building.

## PREVENTIVE DENTISTRY, ECONOMY

BY EUGENE PAYNE, M. D., D. D. S., NEW YORK

### HARDENING THE TEETH

The enamel covering of a normal tooth protects it from decay caused by bacteria, all acids from fruits, sugar fermentation in candy and other sweets.

Bacteria can enter only through the imperfections of the enamel cap, minute crevices in the sulci of the molars or between the teeth, where the surfaces touch, causing an abrasion or roughened surface at that point, permitting the development of bacteria. The bacteria penetrate toward the pulp as they multiply, following the tubuli. The penetrating bacteria are beyond the reach of a tooth brush and tooth powders, after passing the enamel cap.

Crevices and imperfections should be sterilized by placing the rubber dam over the tooth. Saturate the enamel cap with ether to dry and remove the oil and food particles then apply 60 per cent. formalin in alcohol to the crevice, for at least 15 minutes, cut out the crevice with minute bur and fill. Fill the crevices before actual cavities occur. Guard against decay.

There are but few absolutely immune or perfect teeth that do not require the precaution outlined above.

This is the dentistry of to-day. This procedure protects against pain and discomfort of exposed nerves, dead teeth, abscesses, and saves the teeth, avoiding bridge work and plates and is economy. The poorer your patients are, the more they should embrace this procedure and the more necessary for you to carry it out, to save the teeth and save your patients expense. Encourage this plan of treatment as it is the only reasonable treatment to save the teeth and prevent decay.

Patients should not wait until pain, cavities, and discomfort arises, but should go to the dentist for this prevention treatment.

Now what can we do for those who have neglected having their teeth cared for in this manner, and for teeth below standard, that do not resist decay, in spite of all the care you have given them up to this time?

It has been established that lime starvation is responsible for many ills and particularly the teeth. Nursing mothers are sufferers. The milk, rich in lime, diverts lime from the teeth. The teeth become tender and do not resist decay. I have for years given calcarea phos. to prospective and nursing mothers with immediate comfort and to children and adults, after placing their teeth in order, noting great benefit therefrom

in general health, and immunity from decay for a long period where directions have been carried out.

The great fault, many times, lies in that we work on the outside of the tooth only, when great benefit can be derived, by feeding the tooth, strengthening and hardening it by proper diet and lime in a form to be taken up by the blood cells. This is as important as filling and cleansing. The resistance is raised, the teeth become harder, the saliva improves with health, a balance is established that I might say renders it antiseptic, producing its own protective bacteria, and biproducts for prevention of development of the destructive bacteria-forming cavities.

This lime treatment, through food supply, milk, calcarea phos., is so important, that it becomes a health builder aside from the teeth. It is a safeguard against tuberculosis.

It is well known that lime is removed in milling and since people will eat white bread avoiding the coarser hull holding the lime; calcarea phos. is intended to replace this, in a form easily assimilated, supplying the blood cell with lime for its reconstructive and tissue supporting purposes. This should be given before meals while the stomach fluids are alkaline and may be prescribed for months with benefit.

---

*Editor DENTAL DIGEST:*

For the benefit of "a reader" whose communication appears on page 555 September Digest will say that if Saltpetre can be used for refining gold we know nothing about it here.

We are sending you copy of directions for operating the Elgin Vacuum Casting Appliance

"If scrap is used it should first be boiled in 50 per cent. Nitric Acid, to remove any base metals that may be present, washed and placed upon a charcoal block and melted. While the mass is in a molten condition it should be sprinkled with Ammonium Chloride (Sal Ammoniac). This should be repeated until the gold ripples like water. This may be remelted in a carbon crucible and cast into ingots for future use or used as it is."

This method is used not only in our own laboratories but by gold refiners everywhere.

If you will kindly refer this paragraph to "a reader" or publish it in the next number of the Digest you may save him and other readers considerable difficulty.

Very truly yours,  
THE RANSOM & RANDOLPH Co., Toledo, O.

## DENTISTRY AND MEDICINE

By WM. H. BARNHARD, D. D. S., WASHINGTON, D. C.

Dentistry's value, like everything else, is truly only so much as is the measure of its service to humanity. It is hardly conceivable that it could be of as much service as medicine unless indeed it were to grow sufficiently to make medicine an adjunct. An occasionally apparent effort, therefore, on the part of some to compare it to medicine is merely a misdirected effort to elevate dentistry, arising primarily from a misconception of what dentistry really is essentially and potentially. And while dentistry like everything else is what is put in it, still as the two professions stand to-day they are separate in the minds of men, and comparison will not amalgamate or aid either one of them.

However, it might comfort the well-meaning comparers to realize that they can hope and work for the broadening inclusion of such science and art as now happens to be identified with medicine. But to be well-meaning and hopeful is not enough—we must work to broaden our field, thus bringing dentistry up in the ranks of sciences and arts. And this brings me to the point I am desirous of making.

## THE POINT

To-day dentistry stands peculiarly alone, and well on its own feet, and the psychological wave now started for the purpose of absorbing dentistry into medicine should be firmly met and stopped before it overcomes the better judgment of dentists, who when the time comes may or may not be permitted to have some say in the matter. To my mind, the dentist has found his niche, has become a strong type, being more and more respectfully recognized by the public. And the truth of the matter, it seems to me, is that medicine is recognizing this fact too—the fact, in a word, that her despised child Dentistry is growing into such respectable and strong claim to usefulness and individuality that it were high time she be absorbed and lost in medicine. Something akin to Austria's effort at absorption of little Servia. Perhaps I may be harsh—this medical move may be benevolent. If this four or five year course conferring the M. D. degree gave the same or more attention to the subjects peculiarly dental and so ran in accord with the principles of vocational education, then it would turn out better dentists or doctors, or whatever they might be called, since there is usually but little in a name. But will the course of studies be essentially changed from the regular medical course? I doubt it. You and I know that dentistry is too highly technical to thrive on theory. And you and I also know from memories of practice-

beginning days that we heartily wished the college curriculum had contained more of the substantial teaching of technique. I will thank you brothers, one and all, for the frank expression through the pages of this excellent magazine for your views on this important subject.

1208 G Street.

---

### THE NEW TERROR\*

Dentists generally will be appalled at the new prospect opened in yesterday's news concerning the operations of the woman suffrage political caravan in Sullivan County. The news item merely states that Miss Elizabeth Freeman, the resourceful leader of the caravan, went to a dentist in Liberty to get a tooth filled, and that while he was filling it Mrs. Elizabeth Worth Mueller, her chaperon, talked suffrage to him until he was converted. Hitherto no place but the dentist's chair has been safe from the incursion of proselytizing suffragettes; and now that sanctuary is gone. But this is not the worst of it. It is the craftiness of the stratagem, the impenetrability of the disguise, which will strike terror to the dental heart.

Chaperons are not usually in requirement in visits to dental "parlors," except in the cases of children or timid young ladies. In such cases it is esteemed necessary to have moral support at the critical moment. But what need have the manly heroines of suffrage for any one to hold their hands and say at intervals, "Poor dear, does it hurt much?" It is here that the art of device comes in. The dentist is taken unawares; he finds himself, at least the Liberty dentist found himself, in the presence of a young person of unusual attractions; his suspicions are lulled by the presence of the chaperon; he imagines himself to be dealing with a mid-Victorian patient, not a twentieth century paladiness, and at the moment his work begins the mask is dropped and he finds himself defenceless. Instead of facing one of the languishing young ladies of Godey's Lady's Book, such as the presence of the chaperon led him to expect, he is whit-tling at the molars of a militant, while the chaperon is transformed into the Propagandist Triumphant. We look for an invasion of dentists' offices everywhere by warriors disguised as mid-Victorians and flanked by chaperons.—*New York Times*.

\*Courtesy of W. B. Jensen.

## ANSWERS TO "F. N. S."

*Editor DENTAL DIGEST:*

If the dentist signing himself as "F. N. S.," September DIGEST, page 517, will advise his patient to brush his piece of bridgework with Pebecco Tooth Paste, it will remain bright as new.

M. WILLIAMS, Wheaton, Minn.

*Editor DENTAL DIGEST:*

In the September issue of THE DIGEST, on page 517, under an article entitled "Digest Readers, Please Advise," I find "F. N. S." was in the same trouble that I was in about a year ago. The case that I had was caused from using strong Copenhagen snuff. My advice to the young man was to stop using the snuff, which he did, and the cause was removed, and cure was complete.

W. W. S., Chicago, Ill.

*Editor DENTAL DIGEST:*

The query in the September DIGEST, signed by "F. N. S.," looks suspiciously like a case encountered in which Steele's Interchangeable Teeth were employed. The suspicious part of it is that the teeth turned black after the insertion of the bridge, therefore I think the cause may be the same as that in the bridge where the teeth turned black, and had to be cleaned two or three times a month. It was discovered that the dentist in this case made use of piano wire for his dowel pin. The gold also discolored in this case. It is well known of course that the fluids of different mouths will discolor gold, but there is no reason to believe that the fluids will discolor natural teeth after the insertion of a bridge unless there is some metal within the bridge to cause that discoloration.

OHIO.

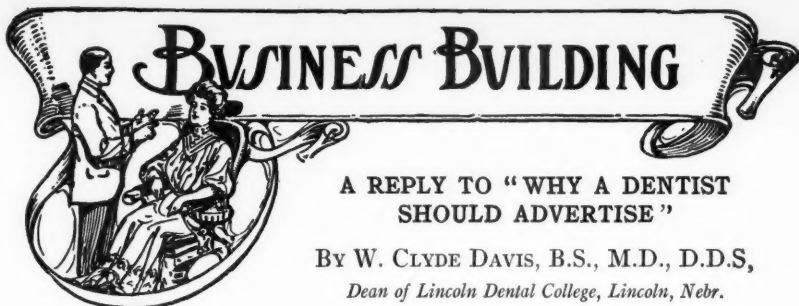
*Editor DENTAL DIGEST:*

With regard to article in August DIGEST, page 442, entitled "High Frequency Generator In Dental Practice," would like to ask the following questions:

1. When treating a chronic abscess what time should be spent on each treatment?
  2. Is it sufficient to use the electrode without the use of medicine?
  3. In sterilizing the root canal from which a putrescent pulp has been removed, is it done through the gum tissue or directly through the root?
  4. How many treatments are required and of how long a duration?
- Any further advice would be appreciated.

R. G. W., Toronto, Ont., Can.





## A REPLY TO "WHY A DENTIST SHOULD ADVERTISE"

BY W. CLYDE DAVIS, B.S., M.D., D.D.S.,  
*Dean of Lincoln Dental College, Lincoln, Nebr.*

Dr. Davis didn't need to write this "to get his name in print" as he jokingly says in closing.

The dentist he writes about is certainly very clever, but somehow I can't admire his course. He leaves a bad impression in my mind. I can't imagine "boosting" one's self in this way. It seems to me that if I had to advertise, mind you if I *had* to, I'd rather come out like a man and buy space and tell parents what dentistry could do for children or for themselves for that matter, and sign my name to it.

Now don't say I advocate advertising because I don't. I merely say I couldn't do it this way. But maybe that's my weakness. — EDITOR.

I am just in receipt of the August DIGEST and have read with much interest the article, beginning on page 453, by Dr. J. Homer, of Los Angeles, Cal. My position as Dean of a dental college for the past sixteen years is a sufficient guarantee that I have conducted my practice along ethical lines, as no one can hold that position who is classed as unethical. Hence, I desire to answer the doctor's article from the standpoint of one who has conducted an entirely ethical practice.

The doctor conducts all of his arguments from a true basis and I most heartily agree with him on most every statement, but he reaches his conclusion in such an attitude that the young dentist would draw the inference that to be an advertising dentist, one must needs go into the public prints with bombastic and egotistical statements, large cuts and flaring headlines, all of which is most unprofessional and inelegant, to say the least. While the doctor did not describe that particular method of advertising as advisable, he left the taste in the reader's mouth that that was the advertising which he champions.

Now the writer of this article is a most thorough believer in advertising in all commercial pursuits and in the dental profession in so far as it partakes of a commercial undertaking. There never was a truer saying than, "He, who on his biz relies, must either bust or advertise." However, there are several ways of doing this advertising. I have some dental friends, who have made a wonderful success financially in the practice of dentistry, and without exception these men are the best and most extensive advertisers. These same men are strictly ethical. Members of the various dental organizations, and they do credit to any dental gathering or family circle in their respective cities. I therefore heartily agree with the doctor in his plea for advertising in dentistry, but I wish

to carry his article further that we may study the when, the where, and the how to advertise.

In the fore part of his article, he states, "No dentist ever made success in practice without advertising of some sort." We believe that to be absolutely true. Again a little further along he says, "There is no good reason why a dentist should not advertise, and every reason why he should." True. He then goes on to say, "He should tell the people what he is, why he is superior to others (if it is true), and why the people need him and his methods, but his advertising must be truthful and honest." Following out this last conclusion of the doctor's, there would be but one dentist in every community, who could advertise his superiority over all of the others and still be truthful and honest. It would be much better if the doctor had not advised us to advertise superiority over our brother dentists. If one is superior to his brother dentists, the public will find it out without his saying a word about it. In fact the public is a little bit skeptical about believing paid statements in the public print, which are self eulogistic.

Now with the doctor's permission, I will describe a most successful advertiser and one who has made it pay and is strictly ethical. A most elegant gentleman and one who stands well, socially, professionally and politically in his locality. This gentleman opened up business as a young man in his city of moderate size. He was not wealthy but he dressed well, better than his brother dentists. His clothes were always well pressed and clean and of the latest cut. He managed to get acquainted with a few of the well-to-do and well-connected young people of his age. As soon as he made a few dollars above his rent he began his campaign.

He would give a theatre party, inviting two or three couples, and the morning papers were sure to chronicle the fact, giving names of those who had been entertained by the clever doctor. He was soon able to become a member of one of the prominent social clubs, and of course, that appeared in the paper. He entertained, and either the typewriter or telephone managed to inform the paper of it. He joined one of the churches, as all good, honorable men should, because the influence of all good men should be on the side of the church. He never failed to be present. He never bought a ticket to the theatre that it was not in the third or fourth row from the front. He always came in after the main part of the audience was seated. He always sat up in front in any public gathering. He engineered his election to everything it was possible to join. Did the work gratuitously and always with a smile as if to say, "Why, of course."

He finally married a society girl and every move that himself and family made has always appeared in the papers. In fact he made many

moves in order that it might appear in the paper. If he was going on a summer vacation a newspaper reporter came to his office and gave him an interview. When the thought occurred to him at his summer resort that it was about time to come home, the newspaper had an article about the condition of the weather there, and what doctor so-and-so said about politics in that locality. When he came home the papers again told of his home coming and the crowd which met him at the depot. No one could ever invite his family for a Sunday drive in an automobile, but that the next morning's paper said, "Mr. So-and-So motored to such and such a point with doctor (our advertiser) as guest. He was equally kind to all business men. None could ever come in contact with him, socially, that the entire crowd was not advertised in the paper. Very frequently the papers gave out his departure to attend some dental convention, a point sometimes reached and sometimes not. In fact the public was led to believe through persistent hammering at it, that this particular dentist was so prominent that he could not stir in his community without it being such an event that the papers must print a report of it. Indeed if you were to go into his city, you could find thousands of people of whom, if you should ask, "Who is the most prominent dentist in this city of Podunk?" they would probably reply, "Oh, Dr. So-and-So, but I do not patronize him as he is too high priced."

Now this dentist is a thorough and good advertiser, but he never claims superiority over his brother dentists. In fact he never draws a comparison. I have been told that when a complaining patient would come to his office criticizing the work of a fellow townsman, that he would not even reply to the criticism, but ask them what they would like to have him do for them.

He has always been on the side of those who would publish matters which would be of an educational nature to the public. He conducts his practice and his office after entirely modern lines and he is now taking in more money a month than any so-called advertising office in the city, whose proprietor advertises that he fills teeth, painlessly, for \$0.39, with free sittings on Sunday.

To close with, I wish to repeat the fact that I am a believer in advertising, but I do not believe it necessary for a dentist to go into the public prints and attempt to enlighten an otherwise intelligent public as to the wonderful sort of creature any particular individual dentist is, or that he has marvelous operations to perform for his patient for a mere song.

Now, doctor, just to make this article practical, I will admit that I have replied to yours in order that I might have my name in public print, so that I might advertise a little. SEE?

## HOW A DENTIST SHOULD ADVERTISE

BY A. E. ANDERSON, D. D. S., PEEKSKILL, N. Y.

This article is worth reading. And, judging from correspondence received, other replies to Dr. Homer's article will be forthcoming.

If you have anything to write, write it. But don't make the mistake of comparing rascally or incompetent advertisers with upright or competent ethical practitioners, because that is a comparison of morals and skill, and doesn't help us with the question of advertising.

Let us take it for granted that there are skillful and unskillful, honest, and dishonest, among both ethical and advertising dentists, and that advertising doesn't necessarily make a dentist either unskillful or dishonest.

Let us learn the advantages or disadvantages of advertising on their own business getting merits. — EDITOR.

I have just finished reading Dr. Homer's article "Why a Dentist Should Advertise" and while I believe implicitly that he should advertise, I wish to array myself on the negative side and remember the saying of the philosopher: "If a man does his work better than his fellows, he may build his home in the forest and the world will make a beaten path to his door."

That is the variety of advertising I believe a dentist should do and then he will find that so far from Dr. Homer's idea of "How are you going to let the people know you are equipped and ready to do business?" the question will be — How to take care of all the people who find it out and begin making that path?

As you intimate in your introduction, it is useless to pick flaws in the writer's logic, difficult though it may be to refrain from so doing if one has a sense of humor. Then too, you merely wish to know if I think what he says is accurate. That is putting it very gently, very!

Of the dentists who advertise by newspapers and handbills, those who are "expert and conscientious" are so far in the minority that I believe it is an actual detriment to a man to employ this means of getting business.

I noticed a card in my barber's shop —

OUR SATISFIED PATRONS ARE  
OUR BEST ADVERTISEMENT

That barber and his assistant have as good a business as there is in town if not the best, and it has come to them because they are clean, obliging and skillful. Can't dentists be as ethical as the members of the trade from which our "profession" sprang? That barber doesn't advertise because he doesn't need to, Dr. Homer's inference to the contrary not-

withstanding. I maintain that the "expert and conscientious" dentist who resorts to display cases outside his office, newspaper ads, and posters, is not only wasting good money, but he is antagonizing that class of people he should desire as patrons, and placing himself on a level with the vendors of quack nostrums whose only virtue lies in separating the ignorant from their hard earned cash.

Dr. Homer asks if the lawyer cares if some dentist advertises and suggests that he will answer the question in the affirmative. That I most heartily do. If he has an ounce of self-respect and has the wisdom of the Twentieth Century and does not imagine himself living in the time of Ruth, that lawyer will care so much that, when he comes to select a dentist to operate upon himself or a member of his family, he will not scan the pages of a daily or weekly paper for an ad. of Painless Barker who "guarantees all work ten years," but will find some one who has been served faithfully and well by a man or woman practising dentistry without brass bands and scare heads. The lawyer will be introduced or referred to this dentist, with the result that the dentist will add another family to his or her permanent clientele. *That is all the businesslike method necessary.*

Please do not infer that I have never met any advertisers who were competent and conscientious. I have. There are many such, and all thinking men will admit that they have a perfect right to conduct their business along such lines as they see fit. They are not to be censured, they are reaping varying rewards, mostly mediocre, for having chosen the mistaken, the unfortunate, the unprofessional kind of "businesslike methods."

Yes, many of these men are worthy of better things than they attain, and we "so called ethical dentists" believe we know the way by which they could have made much more of their professional lives.

For after all, a man's professional life is not a separate part of his personality and he owes it to himself to make the most of his opportunities for usefulness and these cannot be "accurately determined in dollars and cents."

There are many of us who know from our own experiences more than we care to write, regarding the methods of some advertisers. The story is too old and familiar to need discussion.

However I will be glad to answer from my limited experience any letters from brother dentists, whether advertisers or ethical, who are puzzled regarding this great problem of how to advertise.

Brother Homer paraphrases "All things come to him who waits," thus, "more things come to him who goes after, and advertises." The collision is as imminent as it is obvious. How much better then to

change it if we must, into, "All things come to him who *works*, diligently, sincerely and with that high purpose that our calling deserves."

### TO REGISTER DEBTORS

*Editor DENTAL DIGEST:*

Enclosed find an article in reference to the people who owe money to grocers and move away to unknown parts without paying their debts. The bill they are trying to pass is to make them register their new address.

I have found this a long-standing evil in my practice and I urge every dentist to write to the Secretary of the New York State Dental Society to coöperate with the Grocers' Association to the end that this measure becomes a law. It is in the interest of better business methods.

Sincerely,

THOMAS M. WEED,  
New York City.

### GROCERS WOULD COMPEL FAMILIES MOVING, TO RECORD ADDRESSES AT POLICE STATIONS

The New York State Retail Grocers' Association, at its four-day convention in this city last month, considered a plan for the compulsory registration of families in this city removing from one locality to another. It was said the retail grocers, of whom 200 were present, had suffered long from the practice of dishonest persons leaving one part of New York City for another and failing to settle with the local tradesmen.

This evil assumed such proportions that the New York City Retail Grocers' Association had a bill for an ordinance on the subject drawn up for submission to the Board of Aldermen. The proposed ordinance required van and moving concerns to register with officials in each police precinct names and addresses of persons and families removing, together with the addresses to which their furniture is transported. Although a hearing was given by the Aldermen on this ordinance, it was not reported out of committee.

Several grocers expressed fears that the board might not pass the registry measure. Consequently, the speakers appeal to the retail grocers in all parts of the State to support a bill to be introduced at Albany next winter to accomplish the compulsory registry. In return for this support the local retailers promised aid for the up-state grocers in any special legislation they might require to meet local conditions. Meantime, John Steeneck, President of the local organization, said efforts would be continued to have the Board of Aldermen's measure enacted. — *New York Times*.



## AN EXCELLENT COST CHART

By JOHN L. KIRBY, D.D.S., HOLTON, KANSAS.

Some months ago I received from Tennis & Kanouse Co., an excellent chart for working out office costs. I sent it to Dr. Kirby for a criticism and herewith print what he has to say and the chart.\*

If any of you desire to obtain copies of this chart, you may be able to do so by addressing Tennis & Kanouse Co., 444 South Broadway, Los Angeles, California, and enclosing 4 cents for postage and wrapper.—EDITOR.

The Tennis & Kanouse Company of Los Angeles, California, have been sending a business analysis chart to their patrons. This chart attempts in detail to show what the expenses of the average office will be, also how the dentist's original investment might be classified. It takes up the salary of the dentist and the division of the expense account in a way that will enable the dentist to use the expense account to his advantage in finding the hourly cost of tendering service.

The chart has the time problem very excellently outlined to make one realize its value. The ultimate object of the chart is to teach the dentist the cost of an hour's service.

First when not using precious metal, second when precious metals are used.

The great value of the material used in some operations, requires, it seems to me, some such a division. However, I believe each operation when using precious metals could be worked out separately to a better advantage than on the hourly basis.

When operating and not using precious metals the hourly basis seems to me the most practical.

I have such a system in use in my own office at present and it works very satisfactorily.

If you turn to the chart you will find listed the fixed expenses of an office that is working up to capacity as no idle time is noted farther on in the chart.

The items mentioned are common to every good office. The rent is too high for a country office. The last amounts are perhaps an average for many offices. The merchandize and materials not used in actual construction of cases are too low in my estimation for the amount of precious metal used later in the chart. This item varies in different offices according to the class of work that is handled in that office. Very few dentists can give such information and until more men can get this information all guesses are liable to be wrong.

In my own and other offices to which I have access I find this list of

\*The chart is on one large card, but for presenting in the *Digest*, has been divided into page lengths.

expenses as noted in the chart varies greatly. No item is made for insurance, either fire or accident, which is a proper part of every office expense account. Neither are taxes listed. However the list is so complete it will cause the average reader to sit up and think on his own list.

If the reader will now turn to the chart, he will find in heavy type, "Very important," and below, "Net Salary Desired."

Every dentist should decide this in advance, and it should be based on the scale of life he must maintain, and in proportion to his gross receipts. It would be foolish if the gross of an office was \$2,000, and the dentist would put down desired salary, \$2,500. No business house pays a manager more than the gross receipts of the business.

A court might allow a receiver more salary than the cash received, but politics would pay the balance.

I consider this detail of salary as one of the fundamental parts of office information, is vital to finding the cost of service, and is well marked very important.

Next comes invoice which is too low for a good office, it seems to me. In a country office away from a supply house, there is usually about from \$200 to \$500 in supplies carried the year round.

The depreciation of 10 per cent., I believe, is correct, and holds for all offices.

The item for education varies, of course, and can usually be easily known.

Interest on total investment may be high at 7 per cent., but the interest should be reckoned at some per cent.

Retiring debt 4 per cent. surely is within the limits of good business, as no dentist leaves any value in his office when he dies, and the entire outlay should have been returned to him ere he passes away providing he has worked for twenty-five years.

The other items are self explanatory, down to days in year.

I have asked hundreds of dentists how many days during the year they worked, and only a few could tell. This information should be obtainable in every office at a moment's notice.

The dentist who cuts his working days to the limit concentrates his earning ability, and concentrated effort requires close watch for wasted time.

Eight hours a day is enough for any dentist and he who violates the laws of his body by overwork is worse than the drunkard.

I believe 2,144 possible working hours in 365 days is a liberal estimate.

Look now at the chart, and see one of the nicest explanations of where the office hours are lost. Although this notation might vary in different offices, the plan of putting it into per cents. here is fine. This is the best

analysis I have ever seen of non-productive time. It is put in such a way as to immediately attract attention and carry conviction.

The next step, dividing total expense by producing hours, is of course the only thing left to do. Most readers will grasp this problem in mathematics at once, but if the reader fails to catch this do not read further until you realize that the total expense for the year divided by the hours spent in producing the office revenues, gives you the only correct basis of apportioning the expense to the cost of service.

I think this is a fine chart and is doing much good. Every dentist to whom I have ever shown this chart has always asked for a copy to study.

Every outline any man makes will be taken by another and doctored somewhat. But in the doctoring the dentist will teach himself many new things.

The establishing of the cost of doing business is one of the most essential requirements of every commercial venture, and this chart gives the dentist an hourly cost that is at least a thousand times better than guessing.

The bookkeeping record attached to the chart I do not care to discuss only to say that it will without doubt help to emphasize the all important fact of the cost of the service more emphatically.

I will just mention the listing of the time in one column and the value of the time opposite which gives as ready a chart for reference as the computed interest tables in a bank.

Take this chart and study it over and over. If any points come up that are not plain to the reader please write the author, the editor, or myself, and you will have it explained. Fifteen minutes a day spent on this chart for a month, comparing what it gives with your own office, and applying the real meat of it, the cost of an hour's service to every hour's service you render will bring a fine cash reward.

Dr. Holroyd of Pittsburgh taught me to place side by side the cost, and the fee collected. That one stunt has been the best profit making idea any one ever taught me. But I had to work out the cost myself, which I do on individual operations.

Every dentist should have more information of his own business at his command. Such charts as this one will surely teach the profession what information to collect, and how to use it after it is collected.

I am familiar with dentists who keep elaborate systems of accounting but the information they have, tell them very little of the cost of rendering their service.

Some things of a minor value can be added to this chart but the foundation parts—salary, expense, investment, time, and how to apply them to the cost of service,—I consider the best analysis I have ever seen of the business of the dentist. (See copy of chart on next page.)

## COPY OF THE CHART

**BUSINESS ANALYSIS OF YOUR PRACTICE**

Determine the correct rate, per hour, on which to base your fees.

We respectfully suggest discussion of the subject matter contained herein at your next society meeting.

Since time and material is your stock in trade, it is obvious that to get conclusive results it is necessary first, to determine your correct hourly fee rate. This you can do by filling in all blank spaces on this sheet and by making all computations as per example given in left-hand column (this example is the average derived from all data and information we could gather).

Go over your books and records for the past year, and find your yearly expense for:

RENT . . . . .	\$ 540.00
SALARY TO ASSISTANTS . . . . .	416.10
COMMISSION TO ASSISTANTS (operators) . . . . .	
TELEPHONES . . . . .	60.00
GAS . . . . .	10.20
ELECTRICITY . . . . .	43.20
LAUNDRY . . . . .	18.00
ACCOUNTS ON WHICH NO COLLECTION CAN BE MADE . . . . .	125.00
COLLECTION COMMISSIONS PAID . . . . .	
CASH CHARITY DONATIONS . . . . .	25.00
ALL PRINTED MATTER (stationery, cards, announce- ments, books, record cards, examination pads, etc.) . . . . .	85.00
ALL MERCHANDISE AND MATERIAL NOT ACTUALLY ENTERING INTO THE CONSTRUCTION OF FINISHED PRODUCTS AS burs, broaches, medicines, rubber dam, absorbent cotton, napkins, plaster, invest- ment material, disks, strips, etc. . . . .	187.20
ALL MATERIAL USED IN CONSTRUCTIVE WORK OF MINOR VALUE, OR LESS THAN 25c. PER CASE, AS cement, amalgam, temporary stopping, etc. . . . .	120.00
ANY EXPENSE UNNECESSARY TO PERSONAL RE- QUIREMENTS, DONE TO PROMOTE PRACTICE, THIS INCLUDES clubs and entertainments . . . . .	300.00
SOCIETY MEMBERSHIP FEES . . . . .	5.00
EXPENSE ATTENDING AND GIVING CLINICS . . . . .	15.00

**VERY IMPORTANT**

NET SALARY DESIRED PER YEAR . . . . . 2,400.00

(Continued on page 593)

## INVOICE AT COST

EQUIPMENT —			
OPERATIVE	\$600.00		
LABORATORY	200.00		
FURNISHINGS	450.00		
PARTITIONS	100.00		
PLUMBING	50.00		
INSTRUMENTS	150.00		
	<hr/>		
TOTAL	\$1,550.00		
DEPRECIATION			
ON ABOVE		10% per year	155.00
COST OF EDUCATION add to above	3,000.00		
	<hr/>		
TOTAL INVESTMENT	\$4,550.00		
INTEREST		7% on investment	318.00
RETIRING DEBT TO SELF FOR EDUCATION ALLOW			
4% PER YEAR ON COST . . . . .			120.00
This on basis of retiring full amount in twenty-five years' practice — TOTAL NOT INCLUDING PRECIOUS METALS, TEETH, FACINGS AND VALUABLE MATERIALS, ETC. . . . .			
			4,882.70
VALUABLE MATERIALS ENTERING INTO CONSTRUCTIVE WORK			
PRECIOUS METALS . . . . .			360.00
TEETH AND FACINGS . . . . .			180.00
VALUABLE MATERIALS, ETC. . . . .			84.00
TOTAL EXPENSE FOR YEAR INCLUSIVE OF SALARY, INTEREST, REIMBURSEMENT . . . . .			\$5,506.70

You now have the total of your annual expense, including net profit represented by salary, and interest, also reimbursement. The next step will be to determine the number of working hours within the same period.

DAYS IN YEAR . . .		365	365
SUNDAYS . . . . subtract		52	52
	remaining	313	313
NATIONAL HOLIDAYS . subtract		6	6
	remaining	307	307

(Continued on page 594)





The next problem is a record system, which will be simple in form, and will enable you to charge your patient properly, not by guess.

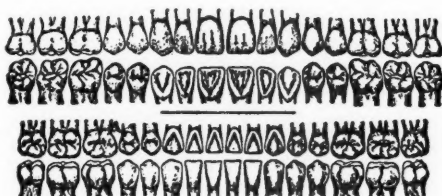
The form printed below is a simplified form of the same system we are now using in our everyday work, revised to meet the requirements of the dental office. This is not an experiment, but an hour and minute, dollar and cent record of every product.

We suggest that you install this system in your office.

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Recommended by \_\_\_\_\_



MIN.	VALUE	MATERIAL SUPPLIED			VALUE
60	\$4.55	Portion Filling Gold			
55	4.18	dwts.	grns.	K Gold	
50	3.80	"	"	" "	
45	3.42	"	"	" " Solder	
40	3.04	"	"	" " "	
35	2.66	"	"	" Platinum	
30	2 28	Teeth			
25	1.90	Facings			
20	1.52	Backings			
15	1.14	Stock Crowns			
10	.76				
5	.38				
		Laboratory Material Charge			
		Total			

DATE	DESCRIPTIVE OF SERVICES	HR.	MIN.
	Laboratory Labor Charge		
	Multiply by Coefficient 3		
	Total		

(Continued on page 596)

This system will enable you to establish the correct average fee for all work of like character. You will have ready reference at all times to records of time required for each operation and the valuable material used.

The record form which we have devised, requires separate charges for material and time. **Hence, it will be necessary to use the fee rate obtained from expense total, less valuable material.**

You have the value of one hour, now find the value of fractional parts of an hour (5 min., 10 min., 15 min., etc.).

This key should be printed on the face of record card to assist in computing charges for services.

The co-efficient of three (3) represents the approximate difference in value of your time and our charges for our best skill, plus a percentage for the responsibility you assume.

We will be pleased to give you the correct co-efficient for your fee rate upon receipt of this information.

No progressive dentist can afford to lose this difference.

---

#### PRACTICE BETTER BUSINESS METHODS\*

By F. U. EMLEY, D. D. S., BELLEPLAINE, KAN.

From the experiences related by some of us along the line of investments, I believe it was a move in the right direction when this society decided to ask men experienced in finance and investments to address us at stated intervals. I hope some of them will suggest a few safe investments for dentists, some that will not take our time and thoughts away from our life's work. It will be interesting to those of us who have idle funds to invest, listening to the suggestions of an expert, but how about us poor fellows who have nothing to invest?

This thought led me to try to make a few suggestions along the line of increasing our income; so that those of us that have no surplus cash will have some and those of us who have some will gain more. If we lay aside something each month, we will be surprised in a few years at the amount.

Some of the principal qualifications necessary to a dentist's success are: Knowledge of human nature, salesmanship, pleasing personality, painless methods, and technical ability.

You notice that I place technical ability away down the line. I be-

\*Read before the Southern Kansas Dental Association, Anthony, Kan., March 6, 1914.

lieve that is where it belongs, because from observation covering a period of ten years, I have discovered that most of us draw our following from possessing the other qualifications to a greater or lesser degree and everyone knows the successful quack or advertiser is strong on knowledge of human nature and salesmanship, and you have probably noticed that they are shy on technical ability, at least they do not demonstrate otherwise.

Every patient should be greeted with a nod, smile, or handshake, and here comes in one of the most important requisites toward building a strong dental practice, namely, a knowledge of human nature and how each individual likes to be approached. To be a master of his environments, the dentist should be able to read like an open book every man or woman who comes into his office. This can be accomplished by study, a kind of study which really becomes the most fascinating and most profitable of all pursuits. No act or impulse of any individual should escape us; and without in the least degree being impertinent or inquisitive, we should try to fathom the motive which prompts people to act. Having a quick intuition of the temperament, whims, prejudices and peculiarities of each patient will be a great help to us in managing that patient and making everything run smoothly and satisfactorily. I do not intend that we should be subservient to the petty caprices or unreasoning domination of those who seek our services, but merely that we should exercise tact based upon the study of their natures to win their confidence. We cannot control patients until we have their confidence (I first learned this while handling children), and we cannot gain their confidence until we understand them.

By acquiring an acute knowledge of human nature, we may determine how best to lead each patient to our way of thinking. If the ones presenting themselves for our services appear to be unhealthy, dwell upon the benefits to their health, derived from having their teeth fixed and the value to them of good health above money. To observers of external appearances, talk about how their appearances will be benefited, show them the difference between artistic work and the other kind. Tell the stingy patient of the lasting benefits to be derived from having good, substantial work done and that any work not so done is hard on both the teeth and pocketbook.

To timid patients, talk about your painless way of doing work, then do it that way if it takes a week to do a little job; and then you will have gained the confidence and patronage of those who will recommend others like themselves to you and come miles themselves to secure your services.

Once convince those patients who are careful about their health of the benefits to be gained by preserving their teeth and the timid patients

that you can and do practice painless methods, then you have two classes of patients to whom you may name most any fee within reason and it will be cheerfully paid. The sanitary cranks are the hardest to discover and the only way to make a hit with these is to be personally clean and neat and keep everything within the office in the same condition.

The reception room should be small, as it is not good policy to have many patients waiting at one time and comparing notes. The large reception room as a rule is not cheerful and inviting, nor has it an air of comfort and culture about it that a reception room should have. Keep old magazines and ordinary dental journals out of the reception room, except those that have an especially beneficial article in them for the patient, and those articles should be heavily underlined in red on the title page, and the article itself marked.

As to the line of business getting and business selling talk that it is necessary to hand out to each person needing our services, each dentist must learn his own business getting and business selling talk.

If we would all study the business side of our profession and apply the knowledge gained, our financial success would be greater. Everyone likes to mix with successful people and patronize them, and we owe it to ourselves and those dependent upon us to appear as successful as possible without going in debt to do so. Mix with people that are successful and a credit to the community; this will be a benefit to us in many ways.

The day is at hand when we dentists who wish to realize an adequate return from our practice, must take advantage of every opportunity that presents itself. We should examine the teeth of each patient that gets into our chair for whatsoever reason and should not let patients leave the chair without telling them of everything they need done in their mouths, and why they need it. If these suggestions to the patient do not bear fruit immediately, they will later.

Do not make long appointments; the strain is too great on both the patient and ourselves. Besides, if a short appointment is broken our loss is not so great. Under ordinary circumstances, the sitting should not be longer than two hours. If one patient is late and another comes before you are quite finished, finish the sitting as soon as possible. Have patients following each other closely, as it makes a good impression when you are prompt and seemingly rushed with patients. But do not crowd appointments to the extent of interfering with perfect service.

To many individuals a sitting is a sitting and they make little discrimination between one an hour long or one four hours long. Usually the patient is more impressed with the number of sittings, and will more cheerfully pay a reasonable fee for eight sittings of one hour each than for two sittings of four hours each. At the first sitting the dentist and

patient should have a perfect understanding as to when and how their services are to be paid for. My terms are: All operations strictly cash, payable after each sitting, and a deposit required on crown, bridge and plate work when commenced, balance when finished. If the patient is not prepared to pay the balance, and the amount is over \$5.00, I ask them to sign a note for the amount, as this eliminates all controversy in the future and gets the money sooner than any other way. Of course in these little towns where we get to know our patients' financial responsibility, we can make some exceptions quite safely, but with others we must deal in a strictly business way or we will be out many a neat sum of money. To all who owe, serve statements promptly and regularly, as the longer an account is allowed to run, the more of our services the patient forgets about.

Now I am going to speak on a subject that I consider very important and that is our bookkeeping and records. It is proverbial that the average dentist is notoriously careless when it comes to matters of record; and so far as his accounts are concerned, it would more than tax the genius of an expert bookkeeper to unravel them and make them intelligible to an ordinary business man. Our bookkeeping need not be elaborate. Merely purchase a ledger divided into long and short accounts; reserve the long accounts for the different dental supply houses that you deal with, whether for cash or on time, and enter each purchase or payment made. By this method I have detected several errors that have been made against me, and saved myself money. Use the short account spaces for all accounts against patients that have work done on time. Record card accounts of the services performed are no good if you ever have to go to law to collect, as the average justice of the peace or jury don't know beans about our markings on a diagrammed chart. I also keep a record card account of these charge accounts for reasons that I will state later. No man can gain the greatest possible benefit from his experience without having records of his work for ready reference and as a basis to guide him in future. These records should contain the name of the patient, date, kind of material used, where used, time consumed and charge. With this kind of a history, as a reference, we can form an opinion as to the virtue of that method of practice as against another. There is another argument from a business point of view which should move every practitioner not to think lightly upon so important a precaution. This relates to his protection from imposition on the part of patients concerning the permanency of the work which he has done for them. It is out of the question for us to remember the facts about each filling or treatment inserted, the kind of material, or the date, or other particulars of the operation; and if we make a practice of it, we are at the

mercy of the patient so far as concerns the length of service or the kind of material they may claim we used if it has come out. Patients are much inclined to misrepresent an operator in these particulars, sometimes innocently and sometimes wilfully. For instance, if a filling is lost from a cavity anywhere in the mouth, it is quite the habit for the patient to jump to the conclusion that it was inserted by the operator who last worked for them, and he frequently gets the reputation of having done a faulty piece of work unless he can prove otherwise.

It is often the case that a patient suddenly finds a cavity in a region of the mouth where within a year a filling has been inserted, and the natural inference is that the filling has come out. It is an unfortunate fact that there are some people who do not hesitate to charge a dentist with the loss of a filling when they know he is blameless, or as a subterfuge to save a dollar or gain favoritism in its reinsertion. There are numberless abuses of this character which assail a busy practitioner, and his only safeguard is a system of well-kept records. When it becomes prominently known that he records every operation, patients will be more careful about attributing failures to him until they are certain of their ground; and in the event of an honest difference of opinion in regard to the character of an operation or the length of service it has given, the matter can readily be cleared up to the satisfaction of all concerned by a reference to the records. Not only this, but the fact that a dentist keeps records of his operations establishes confidence on the part of patients. They are impressed with the fact that he is willing to stand by his work and abide the consequences and they come to him with all the greater assurance that he is a responsible party. In fact, the most desirable class of patients are so fast becoming educated to the idea of having records kept that they are naturally suspicious of the operator who fails in this important particular; and if we are unable to show such a patient a diagram of the work done we would lose caste so far as that patient was concerned. It is an immense satisfaction after many years of practice in one locality for the operator to be able to refer to the records of operations performed for his long-standing patients, and note the length of service performed by some of his painstaking operations. The patient will invariably err in the length of time a given operation has taken. No matter how vividly they may remember the circumstances of an operation, they are inclined as the years go by to place the time of its performance at a period more recent than is actually the case, and this occurs with the most conscientious patients. Another important consideration and advantage connected with record keeping by the dentist relates to the identification of the dead. It sometimes happens in criminal cases, and in the event of a great disaster, that this is the only



means of identification. It is also easy to keep those records of unpaid accounts by themselves, and render statements from them. No dentist can hope to keep his affairs in systematic or satisfactory order who fails to make and preserve accurate records of all his work.

There are two different plans for arranging fees in a dental practice—by the hour and by the operation—and there are arguments for and against each. A dentist's time is his chief stock in trade and to charge wholly by the hour is in some respects a very good plan, then you will not be working for a bare living fee, if you know what it costs you to operate. The cost of material should not as a rule enter into consideration in arranging fees for professional services, yet it is undeniable that in some cases it becomes a factor.

Look about you and see what methods and operations are losing you time and money. Do not make one class of operations pay the losses on others. Please remember that anything that is worth doing at all is worth doing well. Don't clean teeth for \$1 an hour and delude yourself into thinking that you have profited 99 cents.

I keep in touch with my patients by mailing one of these cards (cards were passed) to each patient known to have teeth that need attention. I do this as often as I feel that my patient needs this reminder, and when I need their patronage. There is no practice building that counts for more than to keep in touch with your patients. It is by their recommendation that we build a practice. Whenever we learn that a new patient has been recommended to come to us by another, we should immediately write that person a personal letter of thanks; it is sure to please them and they will in all probability repeat the kindness. When any patient responds to your reminder card, this will be your opportunity to learn the success or failure of your past operations, as you know there are times when we would be glad to make good if we only had another try.

Not a little may be saved from old teeth and crowns having platinum in them and disks and strips used in polishing gold.

I would suggest that we be more economical in our expenditures, and see if more of us cannot save something, make the most of our opportunity, and quit feeling sorry for our patients, when fixing our fees. Let them deny themselves as we have in the past and oftentimes now deny ourselves, but do not exact a fee that will be a hardship for a poor patient to pay. It is true that to establish a reputation in a neighborhood of being the highest priced dentist in the place is often a sheet anchor of strength, provided it can also be said that he is the best in town.

Our professional usefulness does not continue unabated to old age and unless we save something in our palmy days, we are more than likely

to face want in our declining years. There is nothing more pathetic than an old broken down penniless dentist, worn out by years of service, and his patients slipping away one by one, till finally the last loyal patron seems to have abandoned him for a younger man, and he left with nothing but regrets, to face a meagre existence eked out by charity.

That this has been the lot of many a practitioner who in his day was capable and active is only too apparent, and it should prove an object lesson for the young men of our profession to so shape their affairs that when the hand begins to lose its cunning and the brain to be less alert they will all have something laid away to insure independence. It is much more blessed to be able to dispense charity in our later years than to be obliged to receive it.

There is also a book entitled, "Success in Dental Practice," by C. N. Johnson, which I think every dentist, young or old, should study carefully and apply in their practice the suggestions therein set forth, and then I believe we would become better business dentists. It is from this book that I obtained the ideas for this paper.

If we dentists are to hold our own, we must be progressive, adopt modern methods, study human nature, and use our knowledge in this direction, learn to sell our services for what they are worth, then render good services as painlessly as possible, and the results will be all that we could expect.—*Western Dental Journal*.

---

### WHAT DO YOU CHARGE FOR—? WHY?\*

FREDERICK CROSBY BRUSH, D.D.S., NEW YORK, N. Y.

(Continued from the September number)

How about the filling of cavities where amalgam is indicated? Some of the things that are done with this material are little short of crimes. Cavities cut and filled with about as much attention to detail as one would pay to a post hole. Why does a dentist sell a patient a silver filling for seventy-five cents or a dollar, or a gold alloy or a platinum one for two dollars, when it all comes out of the same bottle? Advertising dentists are not the only ones who do this — not by a long shot. Is it not due to the fact that it has been the custom of dentists to place a value on their operations according to the supposed intrinsic value of the material used? What is the sense of deceiving people by talking about silver fillings or gold or platinum alloy fillings? What do they know or care about the name of the stuff that is used? It is the service they want, and that is

what they really pay for, be it good or bad. And if it is bad, it is a pretty lame excuse to blame it on the poor silver filling which really came out of the same bottle that the better gold alloy would have done. Why not be just plain honest, use a good amalgam, call it amalgam, and speak of it merely as one of the remedies incidental to rendering a dental service.

In spite of the sloppy way in which amalgam has been mistreated, it has saved more teeth for a further period of usefulness than all the other filling materials combined. When a cavity is properly prepared, a matrix used, and amalgam properly placed, piece by piece, the edges burnished, cusps carved and then finely polished at a later sitting, you will have rendered a service that will be the equal of any average gold restoration. But you cannot afford to do this for a dollar, you may say. Of course not — why should you? Who would expect you to? You cannot do it, and then sell it as a silver filling for a dollar, nor by calling it a gold alloy filling for two dollars, and expect to make a living; but it is possible to render that kind of a service, and get a professional fee for it; and I am trying to give you an idea, whereby you may determine what that fee should be.

Some of the men who hold up their hands with holy horror at the thought of discussing business topics at a dental convention, and accuse me of trying to commercialize the profession, are the ones who have been preaching or practising for years the fallacy that all that is necessary in order to succeed is to do good work without any thought of the fee and success would follow in due time.

Do you remember the story of the Yankee farmer — some of them, you know, are what we call "near." Well, this one thought it would be an economy if he could get his cow to eat shavings — so he tried it and nearly succeeded — it would have been a real success, only the cow died. That is what has happened to some dentists who have tried this half of a receipt for success, which has been offered to young men for so many years. They may have nearly succeeded, but they have come mighty close to starving while trying it. If you should try to render the kind of service which I have described to you, for a dollar a filling, you would have more work than you could possibly attend to; but you could not earn enough in a day to pay rent and buy shoes for a baby.

Instead of trying to commercialize the profession, I am begging of you to put aside your old commercial ideas and become truly professional men; and what is more, I am trying to show you how you can afford to do it. I want every man in the profession to render the very best service of which he is capable, but I also want him to receive a suitable return for his efforts, so that he can afford to render those services. Among other things, I want to see pyorrhea, as a financial disease, wiped off the map —

it is a disgrace to the profession; and to make it unnecessary for any man to put four or five pinhead fillings, at a dollar per filling, in the fissures of a molar when one good honest filling would be rendering a better service.

I trust you will pardon my frequent use of the pronoun "I" in this connection, but my efforts have been so much criticized and misrepresented that I feel I am justified in trying to make my position clear to you, at this time.

Now let us drop this controversy for the present and take up another question: How can the hour charge be applied to gold inlay restorations so as to be fair both to the dentist and the patient? I use the gold inlay as an illustration, because it represents one of the cases where laboratory work is required. My suggestion is this: Make the regular hourly charge for all actual operative time plus a laboratory charge for the making of the inlay. A suitable laboratory charge may be arrived at in this way — if a regular dental laboratory will take a model and make the inlay for, we will say, two dollars, plus the price of the gold, then you can afford to have it done in your own office, by your assistant, for the same price. If you wish to charge a slight additional profit over this amount, in return for your personal supervision, that is quite permissible. In an office where a considerable number of inlays are being made, the young lady assistant should be able to earn her salary many times over doing this work. This same method of determining a suitable laboratory charge may be applied to crowns or bridge work, and even to dentures. In fact these methods, with a little thought, may be applied to every dental operation with the possible exception of extractions and other like surgical operations.

Now a word or two about exodontia — or in other words, the extraction of teeth. How under the sun can any professional man afford to maintain an establishment, provide sanitary equipment, administer anaesthetics, assume responsibility for the health and possibly for the life of a patient, and run the ever present risk of a suit for damages, for any such picayune fee as is usually charged for extracting teeth? In one place where I lectured, they told me that the customary charge for extracting a tooth was twenty-five cents. Think of it — a surgical operation for the same amount that a Pullman porter expects for a tip for mussing up your clothes and filling your nose with dust. Isn't it absurd! Perhaps you never thought of it in quite that way before. Well, it is time you did — if you are professional men. The only thing I want to say further on this subject is — don't take small change — it belittles the profession, even though it may satisfy you. If a patient cannot pay more than that, then do it for nothing, and charge it up to charity.

If you will bear with me a little longer, there are a few things more

that I would like to tell you which must be observed if success is to be attained when the hour method is adopted, as a means of determining the amount of the dental fee. First of all, efficiency must be studied. Efficiency will mean system, but do not make the common mistake of thinking that system means something complex and cumbersome — on the contrary, system means to simplify even down to the least common denominator. It may necessitate the entire rearrangement of the office, cutting out waste space, and the taking of unnecessary steps, the having of every instrument for a given operation immediately under your hand, a trained assistant to anticipate your every wish at every stage of the operation — four trained eyes and hands working at once instead of two fumbling around haphazardly; the insistence that patients be on hand and ready at the appointed time, and that all operations shall be so planned as to make it possible for the operator to finish with each patient promptly, so as not to waste the time of the next one.

It means, in cases where treatment is required, that an appointment shall be made and sufficient time reserved to permit of rendering an actual service that will forward the progress of the case, and not keep patients running to the office to have a cotton dressing changed. Treatments that accomplish something can be charged for, but the other kind are worthless, and a nuisance, for they waste the patient's time as well as the dentist's. I do not wonder that some dentists say they cannot get properly paid for treating teeth! I shouldn't think they could — but then again the kind of treatment they generally give is not worth much. Not long ago, at a dental meeting, I heard a dentist complaining that he had been working like a hired man all day, and had not been able to charge a thing on the books to show for it. He said he had done nothing but treat abscessed teeth all day, and of course could not make any charge for it until he put the fillings in. Which was he — a professional man rendering a patient a needed service, or a non-union workman expecting his pay by the job? I will leave it to you to decide.

Here is another point that is worth your consideration. Don't use your own pocket as the cash drawer for the office. Every cent of money received should go directly into the office safe, or the bank. Pay all bills by cheque, keep a petty cash account for small items, such as postage, laundry, incidentals, etc. Do not pay personal bills out of the office fund. Keep all personal matters distinctly apart from the office accounts. This is best done by drawing regularly a stipulated salary. Deposit this salary to a separate account, and then regulate your personal expenses so as to live within this salary. Insist on drawing this salary with the same regularity that you would have to pay an assistant. If at any time the office funds are not sufficient to meet the pay roll, it should stimulate you

into paying closer attention to your credits and collections. By drawing this definite salary regularly, and then living within its bounds, you will escape that feast or a famine financial cycle that nearly every professional man experiences. This salary question is a stumbling block for many men — but try it. When once adopted, it does more to awaken a man to other and better business ideas than any other thing that I could recommend.

Remember, there is no money made by working for people who do not pay their bills promptly, and any glory that may be attached to it is ephemeral. If bills are not paid within a reasonable time, refuse to make any more appointments — and don't hesitate to give the reason.

Just one more thing for you to think over and then I will place myself at your mercy. Your Society has brought my good friends, Professor Hillyer and Dr. Voelker, and others here to teach you ways of improving your technique and rendering better services; you have given up your time to come here and get this information. Now I am going to ask you a frank question: What good is it going to do you? If you cannot go back home and capitalize this acquired knowledge so that it will bring you in a better income without using up any more energy, you might better have stayed at home and saved your money, as some of your neighbors probably did.

Don't delude yourself with the idea of getting more patients. Most of you already have more patients than you can take care of properly in twice the number of hours that any dentist, who values his future health, should try to work. What you need is fewer patients, better fees and more fresh air, and then you will be physically fit to render the best possible service to patients, who will learn to appreciate and pay for such service, instead of buying fillings from you because you happen to be a pretty good sort of chap.

Being as how I am a Yankee, I will sum up the whole thing by the question, What does it all amount to, if you are not going to make it amount to something worth while? — *Dominion Dental Journal*.

(The discussion of this article is expected to be published in the November number)

---

### **Leslie Edwin Palmer, D.D.D.**

Died August 14, 1914, in New York City, of appendicitis, in his thirty-fourth year.

Dr. Palmer was born in Palmer, Mass., November 23, 1880, and was a graduate from Tufts Dental College in 1907. He was an associate of Dr. Henry W. Gillett of New York City.

---





# PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.]\*

**TO PREVENT DISCOLORATION BY BOILING.**—Complete elimination of discoloration and injury to instruments which are to be boiled can be accomplished by the use of caustic soda in the water; even though they are not wiped, there will be no rust.—L. K. M.—*Journal of the Allied Dental Societies*.

**GATHERING WAX INTO SHEET FORM.**—A doubly thick piece of window glass, four by twelve inches in size, is dipped into cold water, then into the melted wax. The resulting sheets of wax easily come off the glass.—G. A. BOWMAN, *Dental Brief* (*Dental Cosmos*).

**MECHANICALLY CLEANSING SALIVA EJECTORS.**—Pipe cleaners that can be purchased in any tobacco store may be conveniently used for mechanically cleansing saliva ejectors.—E. W. FLOHR, D.D.S., North Milwaukee, Wis., *The Dental Cosmos*.

**TO RELIEVE IODINE BURNS.**—If the mucous surface becomes blistered by the use of iodine, an application of starch or flour in paste form will combine and form starch iodide, this being harmless.—*Dental Cosmos*. (*Journal of the Allied Dental Societies*.)

**IODINE STAINS.**—Should, through any accident, iodine stains get on the linen of the patient while in the chair, the application of hypo, or fixing solution used in developing, will cause prompt removal.—L. K. M., *Journal of the Allied Dental Societies*.

[Ammonia, if more convenient, will answer as well.—V. C. S.]

**TO SUPPORT LOOSE TEETH WHILE DRILLING.**—When difficulty is encountered in surgical treatment of a tooth loosened through loss of alveolus, a modeling compound impression of the tips of one or more adjoining teeth on either side, cooled and replaced, will aid in supporting it and give comfort to the patient during the sitting.—*Dental Cosmos* (*Journal of the Allied Dental Societies*.)

\* In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.

**A PORTE-POLISHER FOR HOLDING ORANGEWOOD POINTS.**—To construct a useful porte-polisher for orangewood points, cut the hub from an old hypodermic needle and solder it to the shank of an old cone-socket instrument. The orangewood "pegs" can be readily inserted by screwing them into the hub, the threads holding them securely. By placing this on a cone-socket handle, a substantial porte-polisher is obtained. I make them for patients to use at home in prophylaxis treatment.—R. L. HESSER, *Dental Summary*. (*Journal of the Allied Dental Societies*.)

**FOR OPENING TOOTH SORE TO PRESSURE.**—When opening up a tooth that is abscessed or for any other reason sore to pressure, the discomfort to patient may be much relieved by tying a ligature about the tooth with a loop engaging a finger of the left hand with which the operator may pull sufficiently to equalize pressure of bur.—V. C. SMEDLEY, D.D.S.

**TEMPORARY RETENTION OF LOOSE TEETH.**—A ligature wire is placed loosely around all teeth to be retained, and pressed slightly into the interproximal spaces, both on the lingual and labial sides of the teeth. Then, with short pieces of the ligature wire, the labial and lingual wires are bound together between the teeth, twisting the short binding wires until they are tight. This will hold the teeth much more securely than if the wire is woven in and out between the teeth.—CHARLES A. PRIEST, Marion, Ind., *The Dental Cosmos*.

**TO REMOVE AN AMALGAM FILLING.**—Should it be necessary at any time to remove an amalgam filling, we shall prepare a mixture of two parts by weight of cosmoline and one of paraffine by melting them together; this we smear over the filling as a lubricant in burring, which will prevent the clogging and dulling of the bur, greatly hasten our work, and do away with the heat of friction so irritating to the patient.—WM. W. ATKINSON, D.D.S., Philadelphia, Pa., *The Dental Cosmos*.

**TO REMOVE AMALGAM FILLINGS.**—The application of heat by the use of a blunt instrument to amalgam fillings which are to be removed will facilitate the bur in doing its work. The cutting should be started at once after the heat is applied.—*The Dental Cosmos*. (*Journal of the Allied Dental Societies*.)

**ABSCESSES IN DECIDUOUS TEETH.**—In the treatment of abscesses in deciduous teeth it is never necessary to establish a sinus. If you have an abscess in a deciduous tooth, with pus oozing out of the gums freely upon the slightest pressure, if you seal in that tooth formocresol, the pus will virtually dry up. It will disappear. I never intentionally establish

a sinus in a deciduous molar tooth. After the canals are sterilized I never attempt to fill the root with any gutta percha points. I simply fill the root with a solution of gutta percha. The solution I use is known as eucapercha compound, and as I force this solution into the pulp chamber and root canals with gutta percha, I let the eucapercha if it wants to, flow right out from the canals through the sinus. Before that time I never made any special attempt to establish a sinus in a tooth I wanted to save for three or four years.—J. P. BUCKLEY, D.D.S., Chicago, Ill., *The Dental Review*.

TO AVOID BLOW CUTS IN BELLOWS.—If you are troubled with blow cuts in your bellows due to deteriorating rubber, a good way and the very best is to go to a garage in your town and get a piece of discarded inner tubing from an auto tire, take it to your office and fasten it on your bellows. You then will have a bellows that will give you more power and one that will outlast the ordinary rubber several times.—GEO. N. GREEN, D.D.S., Farmington, New Mexico.

METHOD OF REPAIRING LOWER DENTURE WHEN COMPLETE FRACTURE EXISTS.—Hold parts together, put a phonograph needle in warm sticky wax over fracture. Oil teeth only; invest plate teeth downward in lower half of flask allowing plaster to cover teeth one-half their length for easy removal from investment. Now file plate just enough for attachment, then take an old discarded hatchet excavator, roughen parts, burnish on rubber with hot burnisher, place rubber between halves and return to flask. Fill the other half of flask and the case is now ready for the vulcanizer. No plaster to get in rubber nor any excuse to offer for cutting off pins, thereby insuring an even disposition. The case is thoroughly and neatly repaired.—C. O. SHELIN, D.D.S., Mt. Pleasant, Mich.

RETENTION OF UPPER DENTURES.—The theory of the retention of upper dentures without air is simple.

All dentists know that the palatal bone is hard, that is in 97 per cent. of cases; but they do not seem to realize that it is the only portion of the upper jaw that does not change, while the ridge changes extensively, especially under vulcanite, on account of the retention of heat, and under metal also to some extent. Unless provision is made for this change, it is only a question of time when the plate is no longer resting on the ridge, but on the palate and rocking. If there is an air chamber, it is rocking also. The remedy is the placing of a "relief" over the palatal bone, using the base plate wax, extending from near top of ridge to the posterior margin, narrow at the front, averaging one half inch at the middle and sides, chamfered off flush with the model. Of course the plate

must extend far enough beyond the centre to exclude the air. Plates can be worn farther back than usually made, often on a line even with the base of the tuberosities. In about three per cent. of mouths the palate is soft, with usually a crevice in the centre. In these cases the plate is fitted snugly to the palate. No relief or air chamber is needed. Always wet the plate before placing in the mouth.—L. R. HASKELL, D.D.S. Chicago, Ill.

**LOCAL ANESTHETIC IN EXTRACTION OF TEMPORARY TEETH.**—In the extraction of the temporary teeth, the writer has found ethyl chloride to be a very useful local anesthetic. Freeze the gums deeply around the tooth or teeth to be extracted, waiting until there is a heavy "frost" on the gums. The extracting can then be done without pain to the young patient, suffering is avoided, and future dread of the dentist prevented. The writer has been rather astonished at the limited use of this valuable local anesthetic for the purpose mentioned above. In fact, very few of the dentists with whom I have discussed the matter seem to know anything about the use of ethyl chloride in this connection. They seemed to think that nothing at all is good enough as an anesthetic for children. The writer was lately in the office of another dentist and saw the operator gouge down most brutally upon an abscessed temporary upper molar, which he extracted to the great torture of the patient, a boy of about nine or ten years. The boy left the office crying and swearing vengeance against the dentist. The dentist said he had never used nor heard of ethyl chloride for such cases. Incidentally the writer might mention that in one case, that of a patient of seventy-five years of age, for whom any other form of anesthesia was contraindicated, he extracted twenty-four teeth and roots with the use of ethyl chloride, without shock or severe pain. Three sittings were required and deep freezing was obtained at each one. Neuralgic headaches and stomach trouble disappeared after the teeth were extracted and plates fitted. The writer has used ethyl chloride locally in a great many cases, and has never had any unfavorable tissue reactions, no sloughing, and no after pain or bad healings.—W. H. WOODRUFF, D.D.S., Alma, Missouri.

#### QUESTIONS AND ANSWERS

**Question.**—Can you give me a good formula and method for making sandarac varnish?—MISSOURI.

**ANSWER.**—Buy gum sandarac at drug or paint store, dissolve same in 95 per cent. grain alcohol. It dissolves very slowly, takes a week or two or three according to quantity. When thoroughly dissolved, pour top off carefully or strain through a cloth. If too thin allow part of alcohol to evaporate by exposure to the air.—V. C. S.



# DIGESTS

**INTERNAL SECRETIONS AND DENTAL  
CARIES, WITH SPECIAL REFERENCE  
TO THYROID INSUFFICIENCY**

BY H. P. PICKERILL, M.D., M.D.S., OTAGO, NEW ZEALAND,  
*Professor of Dentistry and Director of the Dental School, University of Otago.*

*The Effect of "Internal" Secretions.*—The glands whose secretions may possibly influence the resistance of the tissues to caries are the thyroid, the pituitary, and the thymus, and in each case it is deficiency which may be responsible for an increased susceptibility. It is possible that each of these glands pours into the blood stream certain substances, which influence lime salt metabolism and utilization, and which might be called "osteogenic" or "dento-genetic" hormones.

*Thyroid Insufficiency.*—Of recent years attention has been drawn by Dr. Leonard Williams\* and others to the fact that calcium utilization in the body is intimately associated with the metabolism of the thyroid gland. It is supposed that the internal secretion of the thyroid acts as a lime salt fixative in the body and that when it is absent or deficient the formative organs or tissues are unable to utilize or to hold the salts present in the blood and so the bones and teeth do not calcify to the normal extent.

From clinical evidence the writer is inclined to think that there is an association between that condition seen in children which is now diagnosed as thyroid insufficiency and the presence of dental caries. This, however, is an exceedingly difficult matter to decide definitely; there are so many concomitant circumstances relating to habits and food which require to be considered and eliminated. Some writers on the subject would go obviously too far in attributing health or disease of the teeth entirely to the effect of the thyroid gland. H. E. Waller,\*\* for instance, claims that by giving thyroid extract to a child who had very carious deciduous teeth, the condition of the first permanent molar and central incisor teeth was affected, and when they erupted they appeared "to be all that could be desired."

Such an argument is, of course, by itself open to objection, but in addition it is necessary to point out that at the age when the thyroid extract was given (six years) the crowns of the first permanent molars and central incisors were already completely formed. This case would

\**Medical Review*, May, 1910, and H. E. Waller, *Thyroid Therapy*, 1913.

\*\**Op. Cit.*, p. 4.

rather go to show that in spite of thyroid deficiency teeth can be well formed.

*Effect of Thyroidectomy.*—In order to obtain some precise data as to the possible effect on the teeth produced by loss of the internal secretion of the thyroid, thyroidectomy has been performed by the writer on a number of young rabbits. The results of this operation in rodents is admittedly various, some authorities stating that the animals survive, others that the effect is rapidly fatal. The writer's experience supports this; he only succeeded in getting one rabbit to live. The others (four) died within a week. The animal which survived was kept for over a year and then killed; it thrived well and was apparently perfectly healthy; postmortem showed no trace of thyroid gland present.

*Alimentary Absorption.*—In order to ascertain to what extent any deficiency of osseous development might be due to deficient digestion or absorption in the intestines, the amounts of undigested starch and of calcium in the feces were estimated on several occasions, and compared with that of normal control animals.

It was found that the amount of calcium in the feces of a thyroidectomized rabbit was slightly in excess of that in the controls, but that the starch was much better digested than normally. The average figures are as follows:

	Calcium excreted in feces	Amount of starch undigested
Thyroidectomized animal.....	1.168 per cent.	18.018 per cent.
Control.....	634 per cent.	21.83 per cent.

The amount of starch undigested in the feces is decidedly low; the writer has not previously observed it in normal rabbits to be below 20 per cent. under any circumstances. This increased utilization of starch probably accounts for the animal's general fat condition.

The loss of calcium is considerably in excess of the normal, and it might be supposed that this would have a prejudicial effect upon the calcium content of the bones and teeth.

*Composition of the Teeth After Thyroidectomy.*—The teeth were to the naked eye well formed and normal, the only difference being that they were extremely white and quite devoid of that yellow staining and fine black deposit which is almost universally present on rodents' and other animals' teeth, and also in many cases on human teeth immune to caries. This particular form of black stain or deposit is not due to accidental staining by tobacco or foods, but is "biochemical" in origin, being produced either by chromogenic bacteria or from hemoglobin. It is most commonly seen in the cervical region of teeth in children who



are immune, or nearly so, and is not improbably allied to the dark coloration which almost invariably accompanies a spontaneous arrest of caries.

*The Specific Gravity of the Teeth* was estimated by the pycnometer method and compared with that of similar teeth in controls. (The writer finds it necessary to use similar teeth since there is quite an appreciable difference between the incisor and molar teeth of the same animals, due most probably to the different proportionate amounts of enamel present in the two kinds of teeth.) In this case the molar teeth were used. The control teeth gave a specific gravity of 2.49, whilst those of the thyroidectomized animal gave a slightly lower figure, 2.46. This difference is not apparently great, but the writer has previously shown that the enamel of human teeth demonstrably different in several physical properties differs only to a similar degree in density.\*

*Analysis of Teeth.*—Corresponding with the above the teeth of the thyroidectomized animal showed on analysis slightly less ash than the controls—namely, 79.16 per cent. and 80 per cent. respectively, that is the teeth after thyroidectomy contained 84 per cent. more organic matter than normal. The calcium in the teeth was estimated and showed that the ash of the thyroidectomized animal's teeth contained 2.1 per cent. less calcium than that from the control's teeth.

*Effect on Salivary Secretion.*—It might be thought on a priori grounds that the thyroid and the salivary glands would have something in common. Developmentally they both arise as diverticula from the mouth or oropharynx, and at first the thyroid has also a duct, the thyroglossal, which opens into the mouth (at the foramen cecum), and both may be associated with the utilization of lime salts. It has also been found that in monkeys after thyroidectomy the salivary glands swell up and contain an excess of mucin, but whether this effect is temporary or permanent the writer is unable to say. The saliva was, therefore, on seven different occasions obtained from the thyroidectomized and control rabbits by aspiration from the mouth for five minutes after the subcutaneous injection of pilocarpine (1 mgrm. per kilo.). The following are the results:

	<i>Average alkalinity of saliva per c.cm.</i>	<i>Alkalinity index*</i>
Thyroidectomy rabbit.....	.65	.336
Controls.....	.85	.399

\*Total amount of alkalinity per minute.

It is seen, therefore, that apparently thyroidectomy has somewhat reduced the output of alkaline salts from the salivary glands, and also that

\*Prevention of "Dental Caries and Oral Sepsis," 1914

this is not made up for any increase in quality of saliva as seen by the diminution in the index.

The amount of saliva obtainable per minute, however, was more variable in the thyroidectomized rabbit than in the controls, and was frequently slightly in excess of them. It cannot be claimed, however, that the effect is very considerable either in amount or alkalinity.

Of more interest, however, is the *calcium secretion* of the salivary glands, since it is the metabolism of calcium which the thyroid presumably more directly affects.

Saliva was obtained in a similar manner to the above and estimated volumetrically for calcium. The writer found that the saliva of the thyroidectomized rabbit contained slightly less calcium than the control—namely:

	Control	After thyroidectomy
Calcium percentage in saliva.....	.0220	.0206

That the salivary glands do, however, tend to show a correlated variation with the thyroid gland is supported by the fact that post-mortem the submaxillary salivary glands were found to be much below the normal in proportion to the weight of the animal; thus the average weight of submaxillary salivary glands in normal full-grown rabbits the writer has found to be .3473 gm. per kilo of body weight, whereas in the thyroidectomized rabbit it was only .2268 per kilo.

The above results may be tabulated as follows:

	Control animal Per cent.	Thyroidectomized animal. Per cent.
Specific gravity of teeth.....	2.49	2.46
Composition of teeth:		
Mineral matter.....	80.00	79.16
Organic matter.....	20.00	20.84
Calcium in ash.....	40.00	37.21
Calcium in dried teeth.....	32.00	29.90
Excretion by feces:		
Calcium.....	.634	1.168
Starch.....	21.83	18.018
Salivary secretion:		
Alkalinity per c.cm.....	.85	.65
Alkalinity per minute*.....	.399	.336
Calcium.....	.0220	.0206
Weight of salivary glands per kilo of body weight	.3473	.2268

It is doubtful whether a definite conclusion can be drawn from the above investigation, seeing that only one animal was used. Also of course the animal showed no signs of myxedema. It is nevertheless to be observed that the variations in the thyroidectomized animal although

\*In terms of  $N_{8.0}$  NaOH for reasons for thus expressing alkalinity, see author's "Prevention of Dental Caries," etc.

slight are all in one direction—namely, in that which would *lower the resistance of the teeth to disease*. This coincides with clinical observations. The result therefore goes to support the theory that thyroid insufficiency may favor the occurrence of caries of the teeth.

*The Pituitary Gland.*—As is well known the secretion of this gland has an influence upon the morphology of the jaws, excess of secretion leading to increased growth and deposit of bone (equals increased local fixation of lime salts), whilst probably a decrease leads to the condition called progeria, in which the jaws remain infantile in character and growth, and local utilization of lime salts is defective. Professor Arthur Keith\* has suggested that the internal secretion of the pituitary acts as a "sensitizer" between the nerve fibrils and the functioning cells. That is to say it enables the neurotrophic influence to exert more readily a stimulating effect upon osteoblasts. But why should it be limited to osteoblasts? It is quite possible that ameloblasts may also be similarly affected, and, although the writer has no evidence for such a suggestion, it is worth enquiry as to whether pituitary deficiency may not be a contributing cause to the imperfectly "finished" enamel prisms which Keith has shown to be commonly present on the surface of teeth susceptible to caries. This imperfect finish (never seen either in "native" or European sclerotic teeth) consists in minute depressions at the ends of the prisms. This defect increases the adherence of foreign matter and exposes a larger and more vulnerable surface to the action of fermentation acids.

*The Thymus Gland.*—This gland, which in human beings is normally, of course, only a temporary organ, disappearing after infancy, has also been suggested as playing a part in the etiology of caries. Baoch† has found that in puppies osseous development is retarded by excision, but the writer is unable to say whether any effect was observed upon the teeth. If it does play a part it could only be in connection with the deciduous teeth.

#### CONCLUSION

There is some reason to think that deficiencies of secretions of the thyroid, and perhaps the pituitary and thymus glands, may be concerned in the lowering of the resistance of the tissues to dental caries. It is necessary, however, to be careful of generalization—because thyroid insufficiency may be a causative factor in certain patients it does not follow, *ipso facto*, that it is always a cause of caries. There are very many other factors physiological and pathological also to be always taken into consideration.—*Interstate Medical Journal*.

\**Dental Record*, p. 774, December 1, 1913.

†Quoted by Dr. W. J. Gies (*Journal Allied Dental Societies*, January, 1914).

**MINNEAPOLIS ESTABLISHES FIRST CLINIC OF ITS KIND\***

INVESTIGATION SHOWS 75 PER CENT. OF CASES OF JUVENILES  
NEED ATTENTION.

BY JOSEPHINE SCHAIN

A dental clinic is to be started in connection with the juvenile court, September 1st. This will be the first dental clinic of its kind in the country.

It is believe that the irritation due to bad teeth has an effect on the self-control of the child. In an effort to build up the children, both physically and morally, the teeth will be attended to. Every child who comes into the court will have its teeth examined and the defects remedied.

CLINIC UNDER DR RUSSELL

The clinic is to be the culmination of the medical work being carried on in connection with the court under the direction of the Juvenile Protective League.

Dr. H. D. Newkirk is the director of the research department. Dr. T. W. Russell will be the dentist in charge of the dental clinic. He will be assisted by Dr. W. C. Merkert.

FIRST CITY TO HAVE SUCH CLINIC

Miss Harriett S. Harty, superintendent of St. Barnabas Hospital, has given the use of rooms at the hospital and will furnish the materials used. The Juvenile Protective League has furnished the chairs.

School clinics have been successfully established in many cities. This will be the first time specialized dental work for delinquents will have been done.

75 PER CENT. NEED TREATMENT

"The teeth of 75 per cent. of the children brought into court are in need of care," said Dr. Newkirk. "I have found in my medical work with these children that they take practically no care of their teeth. I do not expect that we will have any trouble to get the children to have their teeth fixed.

"The written consent of the parents will be required before we will do the work. There will be no charge. The fact that the parents do not look after their children is no reason the children should have to suffer. You can't overdo making a boy well.

"Defective teeth lead to anemia and malnutrition. Malnutrition

\*Courtesy A. L. H. Street, St Paul, Minn.

means poorly nourished bodies and brains. Defective teeth are a great source of irritation. Irritation is one of the main factors leading to loss of self-control. This we have observed is a prime cause of juvenile delinquency.

#### BAD TEETH A DELINQUENCY CAUSE

"Sound bodies means better morals. We are working for good, sound bodies in the next generation. We do not believe physical defects to be the main cause of delinquency. Environment, with all that term embraces, is of far greater importance. But environment and physical defects are closely related. Every expression of the life of the individual is more or less dependent on the normality of that individual as a physical being," he said.

For two years medical and surgical work has been carried on under the direction of Dr. Newkirk. During that time 367 physical examinations have been made. Of that number 88 were physically normal, 169 were given surgical attention, 336 operations were performed, 37 were fitted with glasses and dental work was done for nine. The consent of the parent is always gained before operations are performed. They have been successful in remedying the defects in 75 per cent. of the cases.

#### NURSE WATCHES CHILDREN

Miss Renee Kirk, the nurse connected with this work, assists with all examinations, attends court sessions, looks after all cases in the hospital, visits the children and the parents in the home, instructing them in sanitation, hygiene, and kindred subjects.

For the past six months psychological tests have been given by Miss Mae E. Bryne. She is employed by the schoolboard and has charge of similar work in the public schools. Separate classes for the mentally defective and backward children are held in the schools. Through the connection between the court and the school, it is possible to classify these children and in many cases remedy the defects.

Dr. Florence Richardson makes special examinations for girls. The medical and surgical work is done at St. Barnabas Hospital. Miss Harty has placed a large fund at the disposal of the research department.

Miss Kirk and Miss Bryne are taking a special course on defective children at the University of Pennsylvania. Dr. Lightner Witmer, who is in charge of the course, is recognized as one of the best authorities in the country on this work. This fall Dr. Newkirk will make a trip East, to investigate the work carried on in the different cities. Special attention will be given to the work being done by Dr. William Healey of the Chicago Juvenile Court.—*Minneapolis Tribune*.

## BEST ANTISEPTICS TO USE IN MOUTH

Germs in the mouth fight hard for life, according to a statement made recently by Dr. Joseph Head, a well-known Philadelphia dentist, in a paper read before a meeting of the branch of the American Pharmacy Association in that city. Among other things Dr. Head said that experimental means of determining the strength of mouth antiseptics *in vitro* are subject to many fallacies. He continued:

"In 1904 I performed the following experiment: An old bridge, covered with bacterial deposits freshly removed from the mouth, was cut into small pieces, so that the bacterial deposits were undisturbed. These deposits were then submerged in various antiseptic solutions at mouth temperature for various intervals of time, at the end of which the deposits were washed in sterilized water and test cultures made from them on blood serum. Peroxide of hydrogen made the best record of antiseptics tested. But even with a 3 per cent. solution of peroxide of hydrogen and a submersion of five minutes, growths were nevertheless obtained on the blood serum. This test is significant, inasmuch as it proves that to be effective peroxide or, in fact, any antiseptic, must be applied in sufficient concentration for a sufficient time.

"Clinically, peroxide of hydrogen gives excellent results in reducing oral infections. According to the experiments of Paul Bert and Reynard, it was found that all fermentations caused by bacteria were at once stopped by peroxide of hydrogen and the ferment was killed, while no effect was produced on enzymes and physiological ferments such as are found in the gastric juice and pancreas, so that it would practically have no effect on digestion and yet would inhibit the interfering action of micro-organisms.

"Recent experiments in the Mulford laboratories, under the supervision of Dr. A. P. Hitchens, indicate that a 1 per cent. peroxide solution has the same strength in inhibiting the growth of typhoid bacilli as a similar solution of carbolic acid.

"Peroxide of calcium and peroxide of strontium, as recommended by many writers, are entirely too caustic to be used pure in the mouth. When placed in any quantity on the tongue they make a bad burn that lasts for days. However, the commercial preparation of peroxide of magnesium is bland, and, in my opinion, more useful.

"In 1908 I published in the *Dental Brief* experiments showing the effect of grits on the teeth, proving conclusively that tooth powders, even of chalk, were largely instrumental in cutting the well-known smooth grooves in the necks of teeth that so frequently appear from second



molar to second molar. The only reason the powders with grit are so popular, in my opinion, is because they make the front teeth presentable with a minimum amount of labor. While this is partly due to laziness, it is also due to inefficient, unscientific teaching on the part of the profession, who recommend methods of tooth brushing that a simple inspection of the mouth will show do not cleanse the teeth.

"Having investigated some of the prominent proprietary dentifrices, I next applied the same tests to the standard chemical substances that might prove of value in mouth prophylaxis. I found, as would be expected, that ordinary precipitated chalk would cut the cementum and the enamel.

"For patients that have healthy gums with no tendency to gum recession or thinning of the enamel, I use the following formula:

Peroxide of magnesium (No. 200-inch sieve) . . . . .	60 parts
Perborate of sodium . . . . .	30 parts
Pulv. saponis . . . . .	10 parts
Flavoring to suit.	

"Tested with the latest method of brushing for ten minutes, this powder gave no loss of enamel, and from 3-10,000 to 9-10,000 of an inch of cementum.

"But I cannot close without emphasizing the value of a saturated solution, in water, of sodium silicofluoride. It forms a .61 per cent. solution. This may be held in the mouth for from two to five minutes, three times a day, by patients under treatment for pyorrhea. And while in some cases it does not retard the progress of tartar on the teeth, in many cases it most emphatically does, and, as a supplement to scaling the teeth, its healing effect on the inflamed gums is so satisfactory as to be little less than marvelous. It is non poisonous and cheap, being readily purchased C. P. at 75 cents a pound, which is enough to make one-half to two-thirds of a barrel of mouth wash. And, above all, being a fluoride, it has fluoride antiseptic qualities without affecting the porcelain linings."— *New York Times*.

---

### "MEN ARE KNOWN BY THE TEETH THEY KEEP"\*

BY OSCAR DOWLING, M.D.

*President State Board of Health, New Orleans, La.*

Doctor Woods Hutchinson says: "Men are known by the teeth they keep," which is not an unphilosophical means of classification. Almost

\*Read before the Louisiana State Dental Society, 1913.

since time was, the self-respecting horse trader examined the teeth of his prospective purchase, and not alone to determine the age. Teeth whether of horses or men, reveal more than one characteristic.

The application of this proverb to men is due to the wider knowledge of disease. Formerly clothes, bedding, air, were thought to be the medium which spread infection; now it is understood that smallpox, measles, scarlet fever, meningitis, will not become epidemic if close contact with human carriers is prevented.

Infection largely, almost entirely, enters through the mouth and nose. Once having entered, it is in the crevices and corners that the bacteria multiply. If the germs multiply in cavities, they are carried by food into the stomach and by the saliva to the outside, thus spreading infection.

Often, the indigestion which is charged up to food is caused by one of our many hygienic errors of omission—imperfect mastication. We begrudge the time to eat even when teeth are perfect. Much less will we take the trouble to do a good job when the ivories are in a state of bad repair. Food poorly broken up is sure to cause trouble, immediate or remote. A man's indigestion is, in a measure, at least, determined by the teeth he keeps. These very simple propositions point out two of the most common ways in which physical ills are promoted, but they do not, as important as they are, imply all that is to be said of teeth and their relation to human economy.

We are in debt to zoölogy and biology for many facts not known to our forefathers. The application of these truths is just beginning to be understood. Since the days of Darwin and Spencer, it has become increasingly apparent that a new scale on the ear of a lizard may imply a new scheme of the universe; likewise, the preservation of a molar from generation to generation may produce a new type. Into our philosophy there has come an element of humility and expectancy; the opposite of finality. It is drawing us to an intelligent conception that the seemingly impossible "very hairs of your head are all numbered," may be possible. Widening thought reveals a new perspective as to the individual and universe.

The connection with our subject is, for increasing bodily perfection; there must be an increasingly perfect basis. No part of the body may be neglected. To save the first permanent molar; head off disfiguration and abnormal development; to maintain healthy conditions in the mouth of the child, is to lay a foundation in the individual life for greater usefulness and greater opportunity for achievement. It is part of the philosophy of prevention.

Clearly, the initiative must be with the child. Investigations made

in various schools to discover the physical status of the pupils show that appalling conditions exist. The reports form an unanswerable arraignment of our boast that we care for our children as a civilized people should. Many of these inspections have been carried on by men and women trained for the work. Their records are reliable. In some instances the examinations have been superficial and conclusions deduced which led thinking people to doubt the reports of all. Manifestly, it is ill-timed and unwise to make sweeping generalizations for a state or section based on the investigations among a few, limited to a small area.

You are familiar, doubtless, with the figures. From 50 to 90 per cent. of the children examined were found with oral defects. Taking the lowest estimate, the need of immediate action is apparent, both for present effort and for ultimate improvement. To you, and others who understand, mouth conditions found almost universal, seem unpardonable. It is somewhat shocking that mothers who insist on clean faces and hands to the point of the proverb, are without conscience when it comes to the care of the teeth. But in this, as in other violations of the health Decalogue, it must be remembered that the commandments are a late revelation, and there are many who do not know.

Some one has said knowledge permeates from the top down. History bears out the statement. From the laboratory of the scientist, the infinite pains of the mathematician, the discovery of the inventor, the deductions of the philosopher, the table of the statistician, knowledge radiates. The man characterized in his own time as an idealist, a visionary, a dreamer, an enthusiast, becomes the authority of the next generation. Sometimes he may live to see his thought embodied in the laws of his time; possibly, concrete in the habits of the people.

In the Middle Ages, the universities led; in our own day, even in the most practical affairs, the same is true. It is for this reason that the professional man has to assume leadership. He realizes because of wider knowledge of both immediate and ultimate effect that he must, from altruistic motives and those of self-respect, attempt to lead, or force, others who are unaware of the vital importance of these unhygienic conditions.

That the self-imposed task of teaching conservation of health as a vital element in child welfare is almost wholly a thankless one, goes without saying. Physicians and dentists insisting upon medical and dental inspection of school children and remedies have been called advertisers, commercial-minded and other names which imply that their efforts were considered selfish, a means of increasing the revenue of the office. The attitude of the public in general is one of the obstinate conditions which must be overcome. Work only, effective and produc-

tive, will avail. In many places volunteer services have proved of such value that conviction has been wrought in the minds of the authorities and systematized work has resulted.

In one small city where there are six schools, the dental inspector makes a visit one morning each week. The children are sent in classes of five to a room arranged for inspection purposes. Each child is examined apart from the others to avoid any embarrassment. Time is taken to impress upon the individual pupil the oral condition and the necessity for care and for treatment if the latter should be necessary. A complete record is made and notification blanks sent to parents. Instruction is given the different grades emphasizing the salient points.

Equipment for this work is not extensive. As given for several schools by one inspector, it consists of one dozen mouth mirrors, one-half dozen explorers, two glass containers, facilities for washing hands, a small quantity of formaldehyde and antiseptic solutions.

The most important feature of the system is a free clinic. In Newark, New Jersey, in 1912, 3,480 patients under 18 years were treated and 321 above that age. In all, 19,578 treatments, etc., were given, an average of about five to a patient. Data relating to the cost of these free clinics is meager. In those I have happened to note, it ranges from 19 to 34 cents per the individual treated. In German cities, the cost is less than in this country in cities where the work has been introduced.

Some few experiments prove conclusively the value of this inspection and treatment in terms other than those of physical welfare. One is recorded in a popular film which will be shown to-night. In fourteen months' time from dental attention only, the mental powers of a class of twenty-seven children, between the ages of 12 and 14, were increased 99.8 per cent. This experiment opens a perspective as to results which might be obtained if care could be given from school age up—better from birth up.

It can not be hoped that the dental profession or the physicians and dentists by united efforts can overcome these conditions. For success the local board of health and school board, together with state health and school boards, must combine to inaugurate a satisfactory system and this depends upon the children's parents who are the real owners and authorities of the schools.

One of the most perplexing of the questions connected with dental work for children is how to do it satisfactorily under present conditions. The dentist seldom sees "Johnny" until he appears, under protest, with a howling toothache. If he has not heard of the dentist as a terror, his imagination has run riot on the subject. The impatient, or tearful parent, thinks the pain should be stopped at once or the tooth pulled by

magic. Treatment is too slow. The tooth must be pulled some time, the quicker the better. To work with children in their normal condition is difficult for those not specially trained; much more difficult, of course, when the child is suffering pain, or in a state of revolt or terror. Many dentists and physicians do not wish to make experiments; they prefer to work with adults.

In addition, it is generally thought the charges for the care of children's teeth should be less; if there is any differentiation, they should be higher. Only proper appreciation of the part perfect oral conditions play in the mental and physical development of the child will solve this problem. When they fully comprehend, parents will be glad to pay for expert service and the demand will be an inspiration to train for special fitness for the work. The compensation, aside from that arising from all work well done, comes in the friendly relationship established between the patient and doctor. It means a great deal more than many professional men realize. The friendship and confidence of a child is well worth while.

Only a few years ago the health officer would not have thought of attending a meeting of social workers, prison reformers, insurance men, police supervisors, fire chiefs, dentists, or pharmacists, nor would he have been invited. But, appreciation of the idea of social coöperation in all efforts that pertain to public welfare have brought together professional men and others interested in social progress. As yet, the masses of the people do not understand this phase of present development, much less can they be expected to understand the details that pertain to the individual welfare. Indeed, there are many members of these callings who are not wholly in sympathy with either the idea of social union for the common good, or wholly convinced as to many of the specific truths developed.

But, for the thoughtful, sufficient demonstrations of the truths of hygiene have been made to bring conviction as to the need for methods different from those of the past. The interdependence of all portions of the human body, no matter how apparently insignificant; the important relation that some bear to physical perfection; the wisdom of conservation of certain vital elements; and economy of prevention of disease, stand out clearly in all health work as fundamental. With the consciousness of the extent of possibilities for human welfare offered by the application of these principles, there comes also the sense of obligation to society. The professional man's social self seeks coöperation for civic good. He realizes civic need; he must harken to the call.

At present, in every field of social endeavor, preparation of soil and sowing of seed is imperative; the laborers are few; the immediate reward not great; but, "yet a little while and the time of the harvest will come."—*The Dental Summary*.

## PRACTICE OF DENTISTRY IN FOREIGN LANDS

(CONSUL EDWIN N. GUNSAULUS, JOHANNESBURG, SOUTH AFRICA)

### AMERICAN CERTIFICATES NOT ACCEPTED IN SOUTH AFRICA

The qualifications for practising dentistry in the Provinces of the Union of South Africa may be stated as follows:

No person may practice either as a medical practitioner or dentist unless he has obtained a registration certificate signed by the Secretary for the Interior on the recommendation of the medical council of the Province in which he desires to practice.

The qualifications for registration are: Any qualification granted by a licensing authority in Great Britain or Ireland or in any British colony which entitles the holder to registration as a medical practitioner in Great Britain; a degree or diploma of a university in any foreign country between which and Great Britain a full measure of reciprocal recognition of qualification exists.

In view of the fact that there is an absence of reciprocal recognition of medical and dental qualifications existing between Great Britain and any of the States of the United States, it is necessary for any person holding an American qualification who desires to practise in South Africa to obtain a British qualification which will entitle him to registration in Great Britain and, consequently, in South Africa. This will necessitate his proceeding to Great Britain or, if he prefers, to any of the Canadian medical schools whose degree or diploma is registrable in Great Britain. Thus it is that a diploma or certificate granted by an American university or college to an American citizen will not be accepted in South Africa, unless supplemented by a qualification granted by a licensing authority in Great Britain or Ireland or any British colony which entitles the holder to registration as a medical or dental practitioner in Great Britain. This applies not only to America, but to all foreign countries, and, as I am informed, the only countries having with Great Britain a full measure of reciprocal recognition of qualifications as to the practice of medicine and dentistry are Italy and Japan.

Under a recent law it is provided that the degree of doctor of dental surgery conferred by American universities or colleges the curriculum of which is prescribed by the Governor General in council as not being lower than that prescribed by the General Council of Medical Education and Registration of the United Kingdom, entitles British subjects born or domiciled in British South Africa to be eligible for registration as dentists in the Transvaal. The law does not, however, confer upon American citizens obtaining such degree this right to registration, their



qualification for registration as practitioners having to be in accordance with the provisions already mentioned.

Since the enactment of the law permitting British subjects born or domiciled in South Africa to qualify for registration as dental practitioners by obtaining degrees from American universities and colleges, the curriculum of which is prescribed by the Governor General in council as not being lower than that prescribed by the General Council of Medical Education and Registration of the United Kingdom, several of the American universities and colleges have been proclaimed by the Governor General in council as coming under this provision, thus enabling British subjects born and domiciled in South Africa to qualify for registration as practitioners here upon obtaining degrees at such institutions.

The dental profession is well represented in all of the cities and towns of the Transvaal, as well as in other parts of South Africa, among these being several American dentists and numerous others calling themselves American dentists, but whose only claim to the term "American Dentist" arises from the fact that they have pursued their studies in American universities and colleges to some extent, at least.—*Daily Consular and Trade Reports*.

---

### COST OF MEDICAL TREATMENT IN BOHEMIA

(CONSUL FRANK DEEDMEYER, PRAGUE, AUSTRIA)

The city of Prague, population with suburbs 600,000, has about 800 practising physicians. A medical house call to a middle-class family costs \$0.60; an office call, \$0.50; a night call, between 9 and 7 \$1.20 to \$2, according to distance. Professors attached to the clinics of the two local universities charge much more — \$2 to \$4 for a house call and \$1.20 to \$2 for an office visit. The physicians, except those of the homœopathic school, do not supply medical remedies.

About 100 dentists practise in this city. The average charges are: Drawing one tooth, \$0.40 to \$0.80; cement filling, \$0.60 to \$1; amalgam filling, \$0.80 to \$2; gold filling, \$2 to \$4; bridgework, \$10 to \$20.

The annual incomes of these professional men are estimated as follows: Head professor in charge of clinics, salary paid by the Government, \$1,440 to \$1,600, and \$5,000 to \$11,000 from private practice; other professors at clinics, salary paid by the Government, \$1,000, and from private practice \$4,000 to \$10,000; general medical practitioner, not attached to any clinic, \$3,000 to \$3,500; the average income of a dentist is \$5,000.—*Daily Consular and Trade Reports*.

## SOCIETY NOTES

## CONNECTICUT.

The Connecticut State Dental Commission will meet at Hartford, November 19-21, 1914, to examine applicants for license to practise dentistry in Connecticut.—EDWARD EBERLE, 902 Main St., Hartford, *Recorder*.

## INDIANA.

The next meeting of the Indiana State Board of Dental Examiners will be held in the State House, Indianapolis, November 16-20, 1914.—FRED J. PROW, *Secretary*.

## INDIANA.

The Second Annual Meeting of the First District Dental Society will be held in Evansville, Ind., November 4-5, 1914. J. W. ROPER, Evansville, *Secretary* and *Treasurer*.

## IOWA.

The next meeting of the Alumni Association of the Dental College of the State University of Iowa will be held at Iowa City during the Homecoming week on October 22-24 1914.—JOHN VOSS, Iowa City, *Secretary*.

## MASSACHUSETTS.

The Twentieth Annual Meeting of the Northeastern Dental Association will be held at the Hotel Somerset, Commonwealth Ave., Boston, October 15-17, 1914. Papers are promised from Dr. Wm. H. Fitzgerald, Dr. Edward Kennedy and Dr. W. A. White.—CHARLES F. KREPPPEL, Forest Hills, Mass., *Secretary*.

## MICHIGAN.

The semi-annual meeting of the Michigan State Board of Dental Examiners will be held in the Dental College at Ann Arbor, November 14th, 1914.—F. E. SHARP, Port Huron, Michigan, *Secretary*.

## NEW YORK.

The Fifth, Sixth, Seventh and Eighth District Dental Societies, state of New York, will hold a Union Meeting at Hotel Iroquois, Buffalo, New York, November 19-21, 1914.—J. PORTER MALLOY, 463 West Ferry St., Buffalo, New York, *Chairman Local Committee*.

## OHIO.

The Forty-ninth Annual Meeting of the Ohio State Dental Society will be held in Columbus, December 1st-3rd, 1914. Papers on live subjects by able men on Tuesday and Wednesday afternoon; clinics, Wednesday and Thursday forenoons.—F. R. CHAPMAN, 305 Schultz Building, Columbus, Ohio, *Secretary*.

## RHODE ISLAND.

The Rhode Island State Board of Registration in Dentistry will meet in the State House, Providence, R. I., October 7-9, 1914, for examination of candidates.—WM. B. ROGERS, 171 Westminster St., Providence, *Secretary*.

## WISCONSIN.

The Wisconsin State Board of Dental Examiners will meet in Milwaukee at Marquette University, December 14, 1914 for examination of applicants to practise dentistry.—W. T. HARDY, 1404 Majestic Building, Milwaukee, Wis., *Secretary*.

FEDERATION DENTAIRE INTERNATIONALE

At the annual meeting of the International Dental Federation, London, England, August 6, 1914, the following officers were elected for 1914-15.

Hon. President, W. B. Patterson, London.

President, Truman W. Brophy, Chicago.

Vice-Presidents, Harvey J. Burkhardt, Batavia, N. Y.; F. Schaeffer-Stuckert, Frankfurt-on-Main; M. Roy, Paris; W. Guy, Edinburgh; Rudolph Weiser, Vienna; Vincenzo Guerini, Naples; J. Howard Mummery, London; N. Etchepareborda, Buenos Ayres; Ernest Jessen, Strassburg.

Secretary-General, Florestán Aguilar, Madrid.

Assistant Secretaries, Burton Lee Thorpe, St. Louis; C. Van der Hoeven, The Hague; G. Villain, Paris; B. Landete, Madrid.

Treasurer, Edmond Rosenthal, Brussels.

Next place of meeting San Francisco, August 30, 1915.

BURTON LEE THORPE.  
*Assistant Secretary.*

APPEAL

European War Relief

During our war with Spain thousands of dollars were sent by the European Red Cross Societies to the American Red Cross to aid in the care of our sick and wounded soldiers. Now, in the hour of their supreme need, the American Red Cross, both for the sake of humanity and to express our gratitude for their aid to us in the time of trouble and distress, has decided to charter a ship and send to each country involved doctors, nurses, and hospital supplies.

This ship, sailing under the Red Cross flag, will be under the protection of the treaties of Geneva and The Hague, and can enter any harbor for the discharge of its beneficent duty. In no other way can this trained personnel, so greatly needed, reach the different countries. Protection is provided also for the personnel of the Red Cross Societies of neutral states that render aid by the Treaty of Geneva.

The American Red Cross appeals most earnestly to all of our people; to the governors of states, as presidents of the Red Cross state boards; to the Red Cross Chapters; to mayors of cities; to chambers of commerce; to boards of trade; and to all associations and individuals, for contributions to carry on this work. Contributions may be designated by the donors, if they so desire, for the aid of any special country, and will be used for the country designated, but assistance will be given to all, in the true spirit of the Red Cross represented by its motto, "Neutrality-Humanity."

Grieved as we may be over this terrible war, the agonizing cry of suffering men cannot appeal to us in vain.

Contributions may be sent to the American Red Cross, Washington, D. C., or to any local Red Cross Treasurer, or to any one of the following Red Cross Treasurers:

BOSTON . . . . .	Mr. Gardiner M. Lane, Lee Higginson & Co., 44 State Street.
CHICAGO . . . . .	Mr. Orson Smith, Merchants' Loan & Trust Co.
CINCINNATI . . . . .	Red Cross Chapter, 220 W. 7th Street.
DETROIT . . . . .	Mr. Emory W. Clark, First National Bank.
NEW ORLEANS . . . . .	Mr. John J. Gannon, Hibernia Bank & Trust Co.
NEW YORK CITY . . . . .	Mr. Jacob H. Schiff, Kuhn, Loeb & Co., William and Pine Streets
PHILADELPHIA . . . . .	Mr. Francis B. Reeves, Girard National Bank.
ST. LOUIS . . . . .	Mr. Walker Hill, Mechanics-American National Bank.

August 11, 1914

AMERICAN RED CROSS.

## FUTURE EVENTS

- October 5, 1914.—Arizona State Board of Dental Examiners, Phoenix, Ariz.—J. HARVEY BLAIN, *Secretary*.
- October 7-9, 1914.—Rhode Island State Board of Registration, State House, Providence.—WM. B. ROGERS, *Secretary*.
- October 15-17, 1914.—Northeastern Dental Association, Hotel Somerset, Boston, Mass.—CHARLES F. KREPPPEL, Forest Hills, *Secretary*.
- October 22-24, 1914.—Alumni Association of the College of Dentistry, Eleventh Annual Meeting.—JOHN VOSS, Iowa City, *Secretary*.
- November 3-6, 1914.—Next Meeting of the Dental Manufacturers' Club, Drill Hall of Masonic Temple, Minneapolis, Minn.
- November 4-5, 1914.—Second Annual Meeting of the First District Dental Society, Evansville, Ind.—J. W. ROPER, Evansville, *Secretary*.
- November 14, 1914.—Michigan State Board of Dental Examiners, Dental College, Ann Arbor, Mich.—F. E. SHARP, Port Huron, Mich., *Secretary*.
- November 16-20, 1914.—Indiana State Board of Dental Examiners, State House, Indianapolis.—FRED J. PROW, Bloomington, Ind., *Secretary*.
- November 19-21, 1914.—Connecticut State Dental Commission (Examining Board).—EDWARD EBERLE, Hartford, *Recorder*.
- November 19-21, 1914.—Union Meeting of Fifth, Sixth, Seventh and Eighth District Dental Societies of New York at Hotel Iroquois, Buffalo, New York.—J. PORTER MALLOY, 463 West Ferry St., Buffalo, *Chairman Local Committee*.
- December 1-3, 1914.—Ohio State Dental Society, Columbus, Ohio.—F. R. CHAPMAN, 305 Schults Building, Columbus, O., *Secretary*.
- December 14, 1914.—Wisconsin State Board of Dental Examiners, Marquette University, Milwaukee, Wis., W. T. HARDY, 1404 Majestic Building, Milwaukee, Wis., *Secretary*.
- January 28-30, 1915.—American Institute Dental Teachers, Ann Arbor, Mich.—J. F. BIDDLE, Ann Arbor, Mich., *Secretary*.
- May 19-22, 1915.—Texas State Dental Association, Galveston, Texas.
- August 30, 1915.—Federation Dentaire Internationale, San Francisco, Cal.—BURTON LEE THORPE, *Assistant Secretary*.
- August 30-Sept. 1-9, 1915.—Panama-Pacific Dental Congress, San Francisco, Cal.—ARTHUR M. FLOOD, 240 Stockton St., San Francisco, Cal., *Secretary*.

## PATENTS

- 1,086,006, Tooth brush, D. Weiss, Cleveland, O.
- 1,086,887, Dental handpiece mirror, W. H. Bittman, Philadelphia, Pa.
- 1,086,509, Manufacturing tooth brushes and bristle holders therefor, D. L. Chandler, Ayer, Mass.
- 1,086,659, Tooth brush holder, F. Ferenc, Kenmare, N. D.
- 1,086,394, Blowpipe stand, J. Murphy, Hartford City, Ind.
- 1,090,126, Tooth brush, F. Reichmann, Albany, N. Y.
- 1,091,291, Tooth brush, C. E. Carroll, Newport, Ark.
- 1,091,314, Tooth brush, C. H. Erickson, Denver, Colo.
- 1,091,209, Tooth brush, M. E. Gates, Helena, Mont.
- 1,090,939, Composition of matter to be used for the manufacture of plates for artificial teeth, R. H. Newton, Montpelier, Vt.
- 1,091,446, Removable saddle for fixed dental bridges, A. L. Van Arsdall, Kansas City, Mo.